LACUS FORUM XXXIX

Language Varieties

YORK UNIVERSITÉ UNIVERSITY

LACUS FORUM

Journal of the Linguistic Association of Canada and the United States

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Printed in U.S.A.
ISSN 0195-377x

LACUS FORUM

Journal of the Linguistic Association of Canada and the United States

VOLUME 39 NUMBER 1, 2025

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PREFACE

The 39th Forum of the Linguistic Association of Canada and the United States, under the presidency of Alan Melby, Brigham Young University, and chaired by Sheila Embleton, York University, took place from August 8th to August 11th, 2012, at York University, Toronto, Canada. Its proceedings took place in York University's Schulich School of Business, one of the leading institutions of its kind in Canada. This facility was able to provide several small modern adjoining lecture theatres for simultaneous sessions, each of which was equipped with dual computers and projectors, internet, wifi, and sound for presentations. The Schulich School of Business has its own hotel, adjacent to its academic building, providing accommodation for invited speakers and many of the conference presenters.

The theme of the 2012 LACUS was 'language varieties', an area of study and research which covers both dialectal varieties, i.e., geographical, social, institutional and historical varieties, and all the language variations that occur in accordance with personal relations between speaker and hearer/writer and reader, social status, the choice of spoken or written media, and the object of the discourse. For example, Andrea Hòa Phạm looks at change in historical varieties in the paper 'Synchronic Evidence for a Historical Hypothesis: Vietnamese Palatals', and Ekaterina Shagalov & Jonathan Fine consider the characteristics of an institutional variety in 'Fluency and Semantics of Language in Schizophrenia and Mania'. It is customary in LACUS to consider for inclusion qualified papers which present research results outside the designated theme, and a number of the papers in this volume are not explicitly related to language varieties.

The volume leads off with the Presidential Address, presented this year at the annual Presidential Banquet by Alan Melby, which is entitled 'Human and Machine Translation Quality: Definable? Achievable? Desirable?' In it, Professor Melby compares human and machine translation in the context of the history of machine translation and assesses the prospects for the achievement of successful machine translation.

LACUS gives awards to the best student papers presented each year. This year, Emily Byers of Florida International University won the Presidents Prize for her paper 'Reduced Vowel Production in L2 American English by Early and Late Spanish-English Bilinguals.' Darcey Blainey of Tulane University won the Pre-doctoral Prize for 'Liaison in Louisiana: A Diachronic study of Spoken French.'

The selection process for the LACUS presentations published ensures reviewing and editorial criticism in two stages. First the submitted abstracts are vetted by teams selected from the board of LACUS reviewers. Abstracts which are accepted may then undergo editorial criticism and authorial revision. Papers later submitted for publication undergo a similar vetting process by other teams from the reviewer board. Some of the papers accepted may have been accepted only on condition of editorial changes or additions, and all papers accepted for publication have undergone an intensive editing process.

The categories into which the papers in this volume are grouped are irrespective of the theme of the 2012 LACUS. They show just how wide-ranging the interests of this year's presenters are. Categories which especially attracted the interest of presenters are 'Morphosyntax' and 'Brain and Speech', each represented by four papers. Many of the categories are represented by a single paper, e.g., 'Hard Science Linguistics' or 'Language Contact'.

The editors are grateful to the many people who assisted in the preparation of the 39th LACUS Forum. We would particularly like to thank the local organizers at York University, Sheila Embleton and Michael Cummings, and the many reviewers of abstracts and submitted papers.

Daniel S. Mailman, William J. Sullivan, Patricia Casey Sutcliffe

LACUS 39 Postscript

For a variety of different reasons, the publication of this volume has been seriously delayed. Initial editing was done by a number of different people, including primarily Dan Mailman, Bill Sullivan, and Casey Sutcliffe. Subsequent to their involvement, I would like to thank all who have made the publication of this belated volume possible, prime among them Professor Rennie Gonsalves. I would also like to thank the authors who waited inordinately long for their work to see the light of day, and as always the reviewers, acknowledged on a previous page, who enable our high standards of peer review. I would of course also like to thank my co-organizer of the Forum at York University, Professor Michael Cummings. Thank you for your support of LACUS, and we hope to see you at a future LACUS Forum.

Sheila Embleton

LACUS Forum **39:1.1-8 (2025)**

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DISCIPLINING THE MIND: HOW A LINGUISTICS PROGRAM OF STUDY MIGHT SHAPE STUDENTS' COGNITIVE HABITS

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Abstract: University programs of study now commonly identify publicly some of the knowledge and general skills they expect their students to acquire. Beyond such descriptions, however, it is useful to consider more specifically what kinds of distinctive mental habits students within a particular major or program are likely to acquire. This paper will identify several cognitive habits or approaches that would seem likely to be acquired by students who have completed a program in linguistics.

Keywords: linguistics programs, cognitive habits, learning outcomes.

IN RECENT YEARS academic departments at universities have given greater attention to identifying what kinds of intellectual benefits their students can expect to receive as a result of completing specific programs of study. These benefits are frequently found in listed learning outcomes, though some are also found in departmental catalog or website promotional descriptions of the various programs of study. With regard to linguistics programs, these benefits and outcomes that are identified may be phrased in terms of listed content areas that students will have studied, such as sound patterns and systems, or they may be phrased as general descriptions relating to acquired skills in such areas as critical thinking or writing. The Linguistic Society of America's website has a link to an article titled "Why Major in Linguistics (and what does a linguist do)?" which, among other things, lists opportunities for people with a degree in linguistics. Before listing the opportunities, however, the article briefly identifies some of the intellectual abilities that linguistics majors would likely have acquired. It explains:

> Students who major in linguistics acquire valuable intellectual skills, such as analytical reasoning, critical thinking, argumentation, and clarity of expression. This means making insightful observations, formulating clear, testable hypotheses, generating predictions, making arguments and drawing conclusions, and communicating findings to a wider community. Linguistics majors are therefore well equipped for a variety of graduate-level and professional programs and careers. Some may require additional training or skills, but not all do (Macaulay & Syrett).

Although the preceding description of skills acquired by linguistics majors seems accurate and appropriate, it would also be useful to explore somewhat differently the notion of what linguistics students gain in their reasoning and intellectual abilities. The intention here, however, would not be to compare a definition of critical thinking or a list of critical thinking skills with the curriculum or achievements of students in a prototypical linguistics program. The whole area of "critical thinking" is a very complex one, with different authors providing varying definitions or identifying varying qualities or skill sets (cf., for example, Paul & Elder [2001: xx, 371-75]; Nosich [2005: 2-13]; Brookfield [1987: 5-9]; and Pascarella & Terenzini [2005: 156-57]). Paul & Elder (2001: 371) note the following about definitions of critical thinking:

> No one definition of critical thinking will do. Given the complexity of critical thinking—its rootedness in 2,400 years of intellectual history, as well as the wide range of its application—it is unwise to put too much weight on any one definition. Any brief formulation of critical thinking is bound to have important limitations. Some theoreticians provide a range of useful definitions, each with its limitations.

We could of course compare what some of the varying definitions or descriptions say about critical thinking and note how some common elements of linguistics curricula correspond with those definitions and descriptions. As valuable as a consideration of such correlations might be, a separate, though related, question could prove even more interesting. That question concerns whether it is possible to identify a list of specific cognitive strategies or habits that are developed through a linguistics major. Another way of asking this would be to consider whether our linguistics students might approach certain thinking tasks differently from students in another major, such as an English major, even as at least some of the cognitive habits of linguistics students might be shared with students in the sciences and social sciences.

There do in fact appear to be some identifiable and distinctive cognitive habits or approaches that are characteristic of how a linguistics student might approach mental tasks that include, but are not limited to, ones involving language. The focus here will not be so much on affective attributes such as an appreciation for diverse cultures. Nor will it examine general disciplinary stances such as the acknowledged importance of empirical approaches or the embrace of descriptive rather than prescriptive approaches to language, as significant as these are. Instead, our focus here will be on identifying some ways that the study of linguistics shapes how our students work cognitively in tasks requiring specialized thinking skills.

Our examination will be primarily introspective, since the proposed cognitive approaches attributed to linguistics majors haven't been empirically tested here in any way, but the linguistic content that is commonly taught in linguistic programs would seem to reinforce these cognitive habits of mind. The list proposed here, therefore, might be considered as a set of hypotheses, which could be empirically tested at some later point.

The first cognitive habit we shall consider is **the tendency to develop ways to isolate a variable when trying to identify the cause or nature of some situation or phenomenon.** This procedure is introduced to students early on, usually in their introductory linguistics course as they learn about minimal pairs, whether in phonology or other linguistic disciplines. For example, when deciding about whether two different sounds are in fact separate phonemes, in other words, meaning-distinguishing sounds, students learn to identify minimal pairs consisting of words whose only difference is the sound or feature being tested. In an edition of a very popular introductory linguistics textbook, we learn that a meaning difference occurs in the Thai words [paa] and [p^haa],

the former meaning 'forest' and the latter meaning 'to split' (Fromkin et al. 2011: 281). These words differ only in the use of the unaspirated voiceless biliabial stop versus the aspirated voiceless bilabial stop in the initial position of the word. The difference in meaning in the two words of the minimal pair indicates that the isolated variable of aspiration is phonemic, or meaning distinguishing, in Thai. Fromkin et al. (2011: 281) also show that the unpredictable placement of such consonant aspiration in Thai (and thus the ability of aspirated voiceless stops to naturally occur in minimal pairs with unaspirated voiceless stops) provides further evidence that aspiration is phonemic in Thai.

The strategy of isolating a variable is also developed in exercises within the major when students are required to work with an unfamiliar language, identifying the individual morphemes from a selected data set of phrases and sentences and accompanying translation. In the same previously mentioned textbook, one of the accompanying exercises for the chapter on morphology provides a set of Swahili sentences. The sentences vary in the kinds of grammatical structures that they illustrate, but among the larger data set of 24 sentences, we find the following:

mtoto amefika	'The child has arrived.'
watoto wamefika	'The children have arrived.'
mtu amelala	'The person has slept.'
watu wamelala	'The persons have slept.'

These sentences aren't presented consecutively in this way in the data set. And although all of the sentences shown here display a notion that can be translated as the present perfect, other sentences in the set display structures comparable to the progressive aspect or future time in English, as well as differences in animate and inanimate identities for the subjects of the verb phrases (cf. Fromkin et al. 2011: 111-12). When working to solve such a language puzzle, it becomes apparent quickly that one of the primary strategies is to compare specific structures that allow someone to isolate a particular variable. Although this kind of exercise is probably commonly found in an introduction to linguistics course (cf. Dawson and Phelan 2016: 191-92 for another example of the same kind of exercise but involving Quiché), we may also find it in later curricular settings such as a morphology or syntax course. One introductory syntax course textbook, for example, provides a comparable exercise and data set, this time for Ayacucho Quechua (Van Valin 2001: 19-20). The strategy of isolating a variable is useful not only for linguistics but also in answering questions that may come up in a variety of fields. For example, this could be useful in identifying causes behind trends or other phenomena, whether these relate to marketing, politics, medical research, or other science-related settings.

A second cognitive habit is **the tendency to look for the simplest explanation or generalization that can adequately and accurately describe a particular state of affairs** (an approach commonly referred to as Ockham's Razor)**.** This mental habit could be developed through explanations and descriptions that model the skill and perhaps through exercises within the major that require students to provide concise rules to account accurately for the linguistic data that they see. For example, plural formation in English can be accurately accounted for in different ways. But some descriptions are more economical than others. Once again, in their introductory linguistics textbook, Fromkin et al. (2011: 269) illustrate possible descriptions of plural formation

in English and then show how it may be expressed even more concisely. In doing so, they indirectly underscore the discipline's value on such concision:

> An even more concise way to express these rules is to assume that the basic or underlying form of the plural morpheme is /z/, with the meaning 'plural'. This is the 'default' pronunciation. The rules tell us when the default does *not* apply:
>
> 1. Insert a [ə] before the plural morpheme /z/ when a regular noun ends in a sibilant, giving [əz].
> 2. Change the plural morpheme /z/ to a voiceless [s] when preceded by a voiceless sound.

The value placed on generalizations that can accurately and concisely cover the relevant data or linguistic phenomena is also evident in a separate discussion from a syntax textbook. After discussing Ockham's Razor and providing a supporting quotation from the syntactician Frederick Newmeyer about linguistic description, and from Albert Einstein about scientific description, Haegeman (2006: 16-18) concludes: "In linguistics too, we will value an account with a smaller number of rules more than one which requires more rules to explain the same set of data." The ability to articulate concise and accurate generalizations can be highly useful in preparing explanations or instructions regardless of the field, whether drafting technical manuals, or serving as a policy analyst.

A third cognitive habit, which is related to the previous one, is **a propensity to look for underlying commonalities that unify superficial differences.** This mental predisposition can be developed through a study of the changes identified in comparative historical linguistics, such as what we might see in the comparison of cognate roots or words like *cardio* and *heart*, whose current difference largely results from the operation of Grimm's Law (an identified set of sound changes that occurred as Proto-Germanic developed from Indo-European). It can also be developed through the study of forms resulting from phonological and syntactic rules or processes that apply to linguistic items with a particular structural description, such as the intervocalic voicing of consonants whereby /f/, for example, might become /v/. Or it can simply be developed in the study of articulatory phonetics itself, as when a student learns that there are "natural classes" of sounds that share certain features with each other. Thus, we may expect that the student becomes primed to expect commonalities and even look for them amidst the variation that exists.

The habit of looking for underlying commonalities that unify forms displaying superficial differences can yield at least three valuable benefits. First of all, the memorization load is simplified for the various facts when they become unified under a generalization that no longer requires the retention of many miscellaneous facts or forms. Let's consider a specific example from Grimm's Law. Rather than memorizing the isolated facts that /b/ became /p/, /d/ became /t/, and /g/ became /k/, if someone understands the relationship between the sounds, he or she could just remember that voiced stops became voiceless. Many of us have applied this principle of using the familiar to aid in memorizing the unfamiliar when we've had the opportunity to use some knowledge of Greek and Latin roots to learn additional vocabulary we aren't familiar with. This benefit can be applied to a variety of tasks, as the mind that is trained more consciously to expect patterns and to look for them is applied towards familiarizing itself with new information and systems.

Another benefit, which is related to the first one, comes in the way that students can acquire a certain aptitude for making reasonable predictions. Even though a given form or situation has not

been overtly discussed or outlined, a student may still be able to come up with reasonable assumptions or guesses about the behavior or nature of that particular form or situation. Returning now to the example from Grimm's Law, let's say that a student were to be provided with only a partial set of the changes involved in the development known as Grimm's Law, encountering something like the following:

/b/ became /p/
/d/ became /t/
/g/ became _____?

Even if a linguistics student is unfamiliar with the set of changes known as Grimm's Law, he or she would likely anticipate that the probable resulting sound that developed from /g/ would be /k/. Indeed, the student would have recognized that the first two sound changes involved voiced stops becoming voiceless ones that shared the same place and manner of articulation and would therefore have been able to predict the likely change for the third sound.

Still another benefit involved with the same cognitive skill of looking for underlying commonalities that unify superficial differences is that in so doing, students' understanding of paradigms can help in identifying other specific possibilities that should be explored. For example, this time from syntax, let's say that students become aware that an SVO clause can be mistaken for an SVOO clause when the direct object slot is occupied by a compound noun or noun with a preceding modifier, resulting in an ambiguity such as "We brought the plant fertilizer." If students recognize that this ambiguity results from the indeterminacy of what kind of phrasal structure follows a transitive verb like BRING when it is followed by two nouns, and if students are aware that among the existing clausal structures of the language we have SVO, SVOO, and SVOC clause types, then it should at least occur to them to test out whether they could get ambiguities not only between SVO versus SVOO structures but also between SVO versus SVOC and between SVOO versus SVOC clause types. As it turns out, with the right kind of verb, chosen for its syntactic flexibility, they can get such ambiguities. In fact, with a slight change the sentence example above becomes "We made the plant fertilizer," which can be interpreted in these various ways (cf. Oaks 2010: 253 for an analogous and even more elaborate set of examples), though its suprasegmental features of pitch and pausing will need some adjustments according to the differing meanings when spoken. It would seem that a cognitive orientation that looks for and recognizes underlying patterns and commonalities amidst variation, which applies that recognition towards mastering or anticipating the features and possibilities of new or unfamiliar information or systems, and can identify the relevant questions and the parameters of research that are needed to understand a topic or situation thoroughly is important not only in formal research settings but in a wide range of careers as well.

A fourth cognitive habit is **a tendency to recognize multiple paradigms or classification schemes or approaches for a given state of affairs and to assess the relative merits of those paradigms and classification schemes.** Related to this seems to be the ability to consider alternative ways for solving a problem. This mental habit is developed through a study of competing approaches to language classification and description. Thus, for example, when studying English morphology, whether we work with a synchronic approach or a diachronic approach, we will need to divide a word like *daisy* differently. Synchronically we have one morpheme, *daisy*. But diachronically we could recognize that in an earlier time the word originally had three morphemes, appearing as *dægesēage* 'day's eye' (Algeo 2010: 229). Both approaches

are legitimate, but they correspond with different goals and yield different results.

Even within a decidedly synchronic approach to the grammar of English, we can see varying models that account for the language. Traditional grammar has its own way of distinguishing phrases from clauses, employing the requirement that a clause must normally consist of an expressed subject and finite verb construction (a construction utilizing a verb displaying tense such as *sings*, *sang*, *walked*, ***was*** *taken*, ***is*** *walking*, and ***has*** *walked*; or using a modal verb such as ***can*** *sing* or ***would*** *walk*). Thus, the structure *to sing* (as in *He wants to sing*) would be considered a phrase rather than a clause. A transformational grammar, on the other hand, which recognizes underlying subject constituents that may not be overtly expressed and which distinguishes between finite and non-finite clauses, would consider this use of *to sing* to be a clause, though a non-finite one. The difference in these two approaches is not merely terminological, for it relates to alternative ways of accounting for the syntactic behavior of the language in such matters, for example, as case forms and ellipsis.

We would also expect that linguistics students would learn something about how various languages are structured differently and yet manage to work quite well with their alternative systems. Historically, when English lost most of its case marking on the ends of its words, becoming less like Latin and thus unable to signal through its morphology the majority of its case functions, it developed a different system that relied more on word order and prepositions (cf. Baugh & Cable 2002: 56-57), which has turned out to work very well. Neither system is right or wrong. They both work, though each type of linguistic system has its own advantages and disadvantages. What does it do for students to study grammar from different approaches, or to see how differing languages are structured for meaning? Presumably, it would help them consider the fact that there is often not just one way to approach a subject or classification scheme or to solve a problem. It could also prime them to assess the relative merits of each solution or approach in order to identify what might work best in a given situation. This orientation is potentially useful in a variety of settings, such as planning and devising organizational frameworks, preparing explanations used in educational materials, and preparing or marketing ideas and products.

We shall now consider one further cognitive habit likely developed through linguistic study: **a disposition to look beyond the ostensible function, role, or identity of something (including, but not limited to, an utterance or text) to determine its actual function, role, or identity in a particular setting.** This mental habit is perhaps best developed within the study of discourse, not only through the focus on speech acts and implicatures, but also through the attention given to additional pragmatic factors and how all of these factors can affect how messages are fashioned and interpreted. In other words, a linguistics student should become highly aware of the role of context, in the broadest sense, in shaping the formation and interpretation of utterances. One semantics textbook (Hurford et al. 2007), for example, when introducing the concept of speech acts, illustrates the importance of larger contextual factors as it uses an exercise consisting of the following prompt and series of yes/no questions:

> Take a sentence such as *There's a piece of fish on the table.*
>
> (1) Could this sentence be uttered as a means of complaining to a waiter in a restaurant that a table had not been cleared properly?
> (2) Could it, in other circumstances, be uttered to warn one's husband or wife not to let the cat in the kitchen?
> (3) Could it, in still other circumstances, be uttered to reassure one's husband or wife that his or her lunch has not been forgotten?

> (4) Could it, in a different situation, be used to incriminate a child who had raided the refrigerator?
> (5) Are individual sentences generally identifiable with single specific acts that are carried out by uttering them? (262)

The habit of looking beyond the ostensible function, role, or identity of an utterance (or perhaps even gesture) in a particular situation can be valuable, and this is especially true in communicative settings where close attention to non-literal uses of language can be crucial, such as diplomacy and counseling.

This paper has briefly looked at several cognitive habits-of-thought that would seem to be developed in a linguistics program, though the preceding discussion should not be understood to have provided an exhaustive list of such habits. And as noted, at least some of these cognitive habits might also be developed through other science or social science programs of study, a fact that reinforces the linguistic discipline's claim of being science-based. Indeed, its identity as a scientific discipline is evident beyond the more visible and recognizable features of empirical research, hypothesis formation, and descriptivism, and is revealed even in the more subtle habits of thought. At the same time, however, the discipline is distinctive in its object of study and the kinds of tasks that are used to develop the cognitive abilities of its students. Moreover, as a discipline commonly situated in universities among language and literature departments, linguistics and the students and scholars who devote themselves to its study stand in a valuable crossroads, where the production and interpretation of language forms and texts are being studied from very different orientations, yielding very different intellectual contributions and insights. The cognitive habits that have been discussed here may not be the kind of skill set that would easily lend itself to a catalog or learning outcomes list, but those habits may nonetheless constitute some of the most significant outcomes for students of linguistics.

REFERENCES

ALGEO, JOHN. 2010. *The origins and development of the English language*. 6th ed. Boston: Wadsworth.

BAUGH, ALBERT C., & THOMAS CABLE. 2002. *A history of the English language*. 5th ed. Upper Saddle River, NJ: Prentice Hall.

BROOKFIELD, STEPHEN D. 1987. *Developing critical thinkers: Challenging adults to explore alternative ways of thinking and acting*. San Francisco: Jossey-Bass.

DAWSON, HOPE C., & MICHAEL PHELAN, eds. 2016. *Language files: Materials for an introduction to language and linguistics*. 12th ed. Columbus, OH: Ohio State U.P.

FROMKIN, VICTORIA, ROBERT RODMAN, & NINA HYAMS. 2011. *An introduction to language*. 9th ed. Boston: Wadsworth.

HAEGEMAN, LILIANE. 2006. *Thinking syntactically: A guide to argumentation and analysis*. Malden, MA: Blackwell Publishing.

HURFORD, JAMES R., BRENDAN HEASLEY, & MICHAEL B. SMITH. 2007. *Semantics: A coursebook*. 2nd ed. Cambridge: Cambridge U.P.

MACAULAY, MONICA, & KRISTEN SYRETT. Why Major in Linguistics (and what does a linguist do)? Accessed January 27, 2025. https://www.lsadc.org/Files/Careers/why-major-linguistics.pdf

NOSICH, GERALD M. 2005. *Learning to think things through: A guide to critical thinking across the curriculum*. 2nd ed. Upper Saddle River, NJ: Pearson.

OAKS, DALLIN D. 2010. *Structural ambiguity in English: An applied grammatical inventory*, 2 vols. London: Continuum.

PASCARELLA, ERNEST T., & PATRICK T. TERENZINI. 2005. *How college affects students*, vol. 2. San Francisco: Jossey-Bass.

PAUL, RICHARD, & LINDA ELDER. 2001. *Critical thinking: Tools for taking charge of your learning and your life*. Upper Saddle River, NJ: Prentice Hall.

VAN VALIN, ROBERT D., JR. 2001. *An introduction to syntax*. Cambridge: Cambridge U.P.

This article was first published at www.lacussquare.org

LACUS Forum **39:1.9-18 (2025)**

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THE WORLD NEEDS MORE FAROESE

ROBERT ORR
Ottawa

Abstract. The Faroese language, spoken on the Faroes, located midway between Scotland and Iceland, is typologically of very great interest, in all aspects of linguistics: phonology; morphology; syntax; historical linguistics; directionality; and the issue of "small tribal tongues" (Deutscher 2010:235), where it is argued that only "small tribal tongues" (Deutscher 2010: 235) can "truly reveal what is natural and universal". Faroese may provide a counterexample to this generalization.

Keywords: front rounded vowels, zero accusative, reflexive possessives, laryngeals, strengthening, directionality, small tribal tongues.

THE FAROES ARE AN ISLAND GROUP about equidistant between Scotland and Iceland, with a 2010 population of almost 50,000, nearly all of whom use the eponymous language on a daily basis. The Faroese language itself is a Germanic language, more specifically West Scandinavian, and part of the more recent Insular Scandinavian grouping.[1]

Typologically, Faroese is of very great interest, from the point of view of phonology, morphology, syntax, and broader linguistic issues.

1. PHONOLOGY/PHONETICS: THE DEVELOPMENT OF DIPHTHONGS FROM ORIGINAL COMMON GERMANIC LONG HIGH VOWELS AND FRONT ROUNDED VOWELS. Lass 1975 points out that front rounded vowels, albeit uncommon in languages of the world as a whole, tend to cluster in certain language families, of which Germanic is a very prominent example. Within Germanic, Faroese has gone on to show a unique set of developments of the original long high vowels **ī* and **ū*. They have split into new long and short reflexes, e.g. (long), **svīn* > [svʊi:n] (orth. *svín*; cf. English *swine*; Dutch *zwijn*; German *Schwein*);[2] *hūs > [hʉus] (orth. *hús*; cf. English *house*; Dutch *huis*;

[1] Germanic is conventionally divided into West (English, German, Dutch), East (Gothic and various less well-attested languages, all extinct), and North (Scandinavian). The earliest split within Scandinavian is between East (Swedish/Danish) and West (Norwegian/Faroese/Icelandic), with the latter further split into Insular and Continental. Subsequently Continental West Scandinavian converges with East Scandinavian in several important aspects.

[2] To complicate matters, Common Scandinavian *-y- (an original front rounded vowel) merged with Common Scandinavian *-i- in the set of dialects which eventually developed into both Modern Icelandic and Faroese. Synchronically, this is reflected in the etymologically-based orthography used in Faroese, e.g., *ý* in forms such as *býta*, *býtt*, is pronounced identically to *í* in forms such as *mín*, *mítt*.

German *Haus*); etc., (short), **hvītt* > [hvɔi^{h}t] (orth. *hvítt*, cf. English *white*; German *weiß*); *sūrt > [*syrt*] (orth. *súrt,* cf. English *sour,* German *sauer*). Sometimes these diphthongs are carried over into their pronunciation of English, e.g., [grimsbɔi:];[3] for a complete inventory, see Lockwood (1977: 8-13); Thrainsson et al. (2004: 30-40, 395-400).

As may be seen from the description above, the Faroese diphthongs described have developed front rounded elements, both in the long and short reflexes. This includes the development of rounding in the reflex of Germanic **ī*, typologically a very unusual phenomenon.

2. MORPHOLOGY. In contrast to Icelandic, Faroese has undergone long periods of general illiteracy and bilingualism, but, like Icelandic, it has preserved much of the complex morphology inherited from Germanic (Thrainsson et. al 2004: 445). This includes the maintenance of a marked nominative opposed to a zero accusative in a major, perfectly stable declensional subsystem (originally the Germanic *-a-stems < Indo-European (IE) *-ŏ-stem)[4] for over a thousand years, which includes periods of general illiteracy and bilingualism. Such a system, or subsystem, therefore, would by no means be typologically impossible, even if statistically rare. This has in turn wider implications for case marking theory, see Orr (2000: 67-68), Thrainsson et al. (2004: 78-79, 397, 408-409), for further discussion on, e.g., masc and neut (< originally Germanic **a*-stems < IE *ŏ-stems):

	masc	**neut**
Nom	*bát**ur*** 'boat'	*horn* 'horn'
Acc	*bát*	*horn*

In contrast to West Germanic (e.g., Old High German and Old English), in this subsystem the nom is marked by the ending *-ur* (< Old Icelandic *-r* < Germanic *-*az* < IE *-*os*), and the acc by zero (< Germanic *-*am* < IE *-*om*), formally identical to the neut zero ending. Dixon (1979: 77, fn. 23) discusses such systems, and, referring to Runic Germanic, states that such a system is unstable. His later (1994: 65-66) discussion does not expand the point. Within Germanic, the system is also attested in Gothic (masc nom sg *dags* acc sg *dag* 'day' neut nom/acc sg *horn*) and Icelandic (masc nom sg *bátur* (< Old Icelandic *bátr*) acc sg *bát*; neut nom/acc sg *horn*), but in both these instances one might cite special circumstances: Gothic is now a dead language, and we do not know how long that subsystem would have lasted. Perhaps we happened to catch Gothic right at the moment when the subsystem was functioning, whereas another century or two either way, and we would have missed it; in fact, later forms of Gothic do show the loss of the *-s* ending in the nom sg masc, resulting in a subsystem similar to that attested in West Germanic, see Krause (1963: 37, 44). Icelandic is a special case: it has developed under conditions linguistically almost unique (no substratum, very high rates of literacy). The situation within Faroese is somewhat similar; Faroese, however, while preserving most of the complex morphology inherited from Germanic, has undergone far more changes than Icelandic, including some degree of morphological levelling and simplification, which, in some instances, has included the expansion of the *-ur* ending as a nom marker, contrasted with zero as an acc marker, cf. Old Icelandic nom sg *fugl* acc sg *fugl* 'bird',

[3] Heard by the author in Trøllanes on Kalsoy, August 1979, from an elderly Faroese fisherman recounting, in English, places he had visited as a young man.

[4] In contrast to the rest of IE, and based on a set of developments unique as a whole to Germanic. Germanic also merged IE *-ŏ-, *-ă- > *a and IE *-ō-, *-ā- > * ō. In several Germanic grammars reference is made to the *a-stems (normally IE * ŏ-stems) and *ō-stems (normally IE * -ā-stems).

Faroese nom sg *fuglur* acc sg *fugl* id; Old Icelandic nom sg *steinn* acc sg *stein* 'stone'; Faroese nom sg *steinur* acc sg *stein* id.; Old Icelandic nom sg *þræll* acc sg *þræl* 'slave', Faroese nom sg *trælur* acc sg *træl* id.[5] Loanwords are also included in this system, e.g., nom sg *fílur* 'elephant' acc sg *fíl* (Icelandic nom *fíll* acc *fíl*), and the same development may be found elsewhere in the inflectional system, e.g., Old Icelandic *kjósa* choose-INF - *kýss* 'choose 2nd/3rd sg pres'; Faroese *kjósa* - *kýsur* id. (Thrainsson et al. 2004: 397; 424). It is worth reemphasising, however, that this subsystem in Faroese has remained perfectly stable—it has lasted 1,000 years and shows no signs of remodelling.

3. SYNTAX. In common with Icelandic, and in contrast to Continental Scandinavian and West Germanic, Faroese reflexive pronouns often do not refer to the subject of the clause where they occur, see, e.g., Barnes (1986, 1987). It is well-known that in Icelandic matrix subjects (subjects of the main clause) can control reflexivisation in subordinate clauses, even if the subordinate clause has a different subject than the main clause (see Maling 1984, and the literature cited therein), a phenomenon which may be dubbed "remote control" of reflexives,[6] involving both reflexive pronouns and reflexive possessive adjectives. Matrix subjects can exert a similar degree of control in Faroese (see also Barnes 1986: 118-125). This paper will concentrate on the reflexive possessive *sín*.

Faroese has several examples of direct objects, and not subjects, controlling reflexives within the main clause, e.g.,

1) *Eg ... skal flyta* ***ljósastaka tín*** **[acc]** *burtur úr staði* ***sínum***
I ... shall remove **candlestick your** away from place **own** (Revelation II,5; cited by Lockwood (1977: 117)).

2) *Vit hittu* ***Mortan*** **[acc]** *við mappu* ***sína***
We met **Mortan** with brief-case **own**

3) *... kom ein útróðrarbátur framvið og skeyt* ***hann*** **[acc]** *á setri* ***sínum***
... came a fishing-boat past and shot **him** on **own** nest (á Ryggi 1978: 70).

where *sín* refers to the direct objects *ljósastaka*, *Mortan*, *hann,* (Barnes 1986: 107-112).

Clauses in apposition to a direct object may also be affected:

4) *Um heystið síggja vit* ***teir*** *aftur á suðurferð, ofta eini* ***hjún*** *við ungum* ***sínum***
In autumn-the see we **them** back on south journey, often **a pair** with young **own** (á Ryggi 1978: 52).

Object-controlled reflexives also co-occur with certain verbs:

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[5] In the evolution from Germanic to Old Icelandic, the *-r* ending (< Germanic *-az) was lost in certain forms as a result of phonological change; Faroese has restored *-ur* in these forms.

[6] Gothic has hardly any examples of "remote control" of reflexives, see, e.g., Delbrück (1893: 484), which may be due to the limited nature of the corpus. Harbert (1983: 122 fn.) cites an example from the *Skeireins*, with the caveat that it is unique:

akei was kunnands þatei swaleikamma waldufnja mahteis ***seinazos*** nauþs ustaiknada wesi
but (he) was knowing that such authority of-power own force revealed would-be

where *seinazos* refers to the understood "he" in the main clause.

5) *... eg takkaði **Gudi** innantanna fyri **sína** miklu góðsku.*
... I thanked **God-DAT** internally for **own** great goodness (*Varðin*, 1973: 40: 140).[7]

Subjects in subordinate clauses under remote control also co-occur with *sín*:

6) *Hevði hann ikki sagt honum, at mamma **sín** var gomul og veik*?
Had **he** not said him-DAT that mother **own** was old and weak? (Jakobsen 1978: 98).

Here *hann*, subject of the main clause, controls *sín,* part of the subject of the subordinate clause. This control can even reach across sentence boundaries in some instances, e.g.,

7) *Teir vistu ikki betur enn, at teir høvdu dripið hann, søgdu teir. Nei, tað var ikki **seg**, teir høvdu dripið, men mommu **sína*** (referring back to *hann* in the previous sentence); (Jakobsen 1978: 99).
They knew not better than that they had killed him, said they. No, that was not **self**, they had killed, but mother **his**-ACC.

In his discussion of such examples Barnes (1986: 107) suggests that "... for an object to control a reflexive, the native speaker must normally at some point in the derivation of his or her sentence conceive of that object as subject."

It might be noted that in older stages of IE the reflexive possessive adjective *swe (cognate with Faroese *sín)* often does not refer to the subject of the clause in which it occurs either, and this was noted in much of the earlier literature on the subject. For Slavic, Miklošič states that:

> " ... se and svoj stehen demnach, so oft sich die handlung auf das subject des satzes bezieht: abweichungen von dieser regel finden sich bei dem possessivum svoj." (1883: 90) …. svoj hat häufig eine allgemeine bedeutung und entspricht dann dem mit svoj etymologisch verwandten griechischen ἴδιος, desgleichen dem griech. οἰκεῖος, dem lat. proprius und dem deutschen eigen ..." (1883: 102).

Delbrück (1893: 486-498) gives several examples from various older IE languages where *svo (his own reconstruction) refers to an object rather than to the subject; he states that the antecedent of **svo* must be animate and personal, e.g., Sanskrit):

8) *Adēvayum ava svah sakhā dudhuvitā* (Rig-Veda 8.70.11)
Godless down own friend cast (1893: 494)

Also, for Slavic, Havránek (1928: 167) makes a similar point: "... fakt, že mívá v starých památkách pron. svoj jasně význam 'proprius' ...." He cites several pertinent examples, e.g.,

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[7] Old Icelandic had a similar construction, e.g.,

*Arinbjorn þakkaði konungi orð **sín*** (Egilssaga; see 5) above)
Arinbjorn thanked king-DAT words **own**

9) *Y opusczam kazdemu swe prawo* (Old Polish Ort. Magd)
And I-leave to-each own right (Cited by Havránek 1928: 168)

For Latin, Scherer (1975: 24) cites similar examples, saying that "Das reflexive Possessivum kann sich von jeher statt auf das Subjekt auch auf ein anderes Satzglied beziehen ...", e.g.,

10) *Suas res Syracusanis restituit* (Livy 29.1.17)
Own property to-Syracusans he-restored

11) *Siquidem hanc vendidero pretio suo* (Plautus, *Persae*)
If **her** I-sold at-price **own**

With reference to general IE conditions, Watkins (1976: 309-310) quotes Delbrück, and comments that, "It is particularly noteworthy that *suo refers back to the topic of the sentence, not to the subject, where the two do not coincide," giving examples from Latin, Greek, and Sanskrit, while not, however, pursuing the matter any further. The above examples in Faroese seem to point to the preservation of an earlier stage of IE, before reflexive possessives became identified with the subject/agent. The complexity of subject-topic relations implied thereby, and the diachronic development, is a topic for further research; suffice it to note that Faroese data are essential for any such universals-oriented study, as well as for consideration of the diachronic aspects, which leads us to another area of Indo-European reconstruction.

4. HISTORICAL LINGUISTICS. Winfried Lehmann has been writing on certain Indo-European topics for well over half a century (see, e.g., Lehmann 1952), one of which is Holtzmann's Law (often referred to as *Verschärfung,* see Collinge (1985: 93-101); Thrainsson et al. (2004: 40-42, 402-403)), a sound-change covering East and North Germanic whereby Germanic *-jj-, *-ww- developed to -ggj-/-ddj- and -ggw- respectively, e.g.,

West Germanic	North Germanic	East Germanic	
Old High German *treu*	Old Icelandic *try**gg**r*	Gothic *tri**ggw**s*	< *-ww-
Old High German *zweio*	Old Icelandic *tve**ggj**a*	Gothic *twa**ddjē***	< *-jj-

Lehmann, and many other writers have explained Holtzmann's Law by citing the effects of lost laryngeals (1952: 39-46; 1993: 128; more recently also see 2004: 130). However, it appears that the laryngeal theory may well be unnecessary in this case. The literature almost invariably omits the fact that the process covered by Holtzmann's law is repeated in Faroese, where *Verschärfung* (phonetic [dž], orthographic *-ggj-*) develops after *í*, *ý*, *ei*, *ey*, and *oy* in hiatus, later in final position, and sporadically before *h* and *ð,* e.g.

níggju	'nine'	Icelandic *níu*
nýggjur	'new'	Icelandic *ný*
deiggj	'dough'	Icelandic *deig*
heyggjur	'hill'	Icelandic *haugr*
oyggj	'island'	Icelandic *ey*

In the same way, albeit more sporadically, *-gv-* (< **-gw-*) develops after certain original long rounded vowels (*ó* and *ú*):

kúgv	'cow'	Icelandic *kú*
skúgvur	(*Skúvoy* – Skua Island)	English *skua*
grógva	'grow'	Icelandic *gróa*
gjógv	'cleft'	Icelandic *gjá*

see Henriksen (1975: 17-18), Lockwood (1983: 9-10), Thrainsson et al. (2004: 40-42; 402-403), although some of the effects are obscured by analogy, and the coexistence of modern and archaic forms, e.g., *frúgv*/*frú* (Lockwood 1983: 25, 53). *Verschärfung* in Faroese, however, and therefore quite possibly in earlier Germanic as well, appears as a textbook case of glide strengthening (fortition; see Orr 2002: 20-25 for further discussion), therefore rendering an explanation involving the laryngeal theory unnecessary.

Glide strengthening is a fairly common phenomenon, e.g., at various stages of Romance, e.g., French ***j***u***g***e < Latin ***i***u***d***ex, Italian ma***gg******i***or***e*** < Latin ma***i***or***e***m, Argentine Spanish [*až́á*] < [*ajá*] < *alla* ([alja]), French ra***g******e*** < *ra***bž***a **<** *ra***bj***a; pro***ch******e*** < *pro***pš***o < *pro***pj***o and Brythonic *gw* < IE **w*, e.g., Welsh ***gw***yr < IE ****w***ir-, Brythonic ***dd*** [ð] < ****jj*****,** e.g., Welsh *oedd* < **esāt*, cf. Lewis and Pedersen (1961: 11, 14-15), Collinge (1985: 97); Polish *pçåsek* < *piasek*; Andersen (2003: 25-6); see also Orr (2002: 20-25).

It is astonishing that the Faroese material is hardly ever cited in discussions of Holtzmann's Law, which may be simply seen as a textbook example of strengthening. It calls into question the need for positing laryngeals to explain this phenomenon over a part of Germanic at all. Perhaps in this light Holtzmann's Law should serve as an example of the **overextension** and **misuse** of the laryngeal theory (Anttila 1989: 273) rather than as a canonical, basic example thereof.

5. LOCATION: SPECIFYING DIRECTIONALITY. Over the past fifty-odd years linguistics has seen a great deal of discussion of the grammaticalisation, or embryonic grammaticalisation, of directionality. For example, as part of his comprehensive study of Dyirbal, Dixon (1972: 48) cites a group of bound forms specifying location in relation to particular hills, rivers, etc., which would probably undergo major reanalysis or fall out of use completely if Dyirbal speakers were to move, or be transferred, elsewhere. Schmidt (1985) points out that under the impact of English, Dyirbal has recently undergone a considerable amount of change. Disappointingly, however, she (1985: 95) states that "... No systematic study [of these forms - RAO] ... was undertaken." One can only speculate as to how these forms might have evolved if Dyirbal had undergone an expansion similar in scope to that of English or Spanish, or even what would have happened if Dyirbal had undergone change while surviving as a vigorous spoken language. Similar cases from Himalayan languages are noted by van Driem (2001), who points out that speakers of these languages who emigrate to countries such as the Netherlands rapidly lose such constructions.

Similar constructions in embryonic form were widespread in earlier Germanic, involving references to points of the compass, often with the connotations changing over time and space, e.g., in Modern English and German the name *North Sea*/*Nordsee* contrasts with the Viking age *Vestmarr* ("West Sea")/*Westsæ* (Townend 2002: 106). Cf. also Viking Greenland, where the Western Settlement (*Vestribyggð*) was located **north**, rather than **west** of the Eastern Settlement (*Eystribyggð*). *Egils Saga Skallagrímsonar Hofuðslausn* contains the form *vestr* referring to a voyage from Iceland to England, because the original compass was based in Norway. The phrase

austr í Vík (eastwards to Vík) in Norway referred to **Southern**, not **Eastern**, Norway. In Ohthere's Old English account of his voyage to the North Cape and beyond: *eastewerd* appears to be attested in the meaning "in the south" (Townend 2002: 96-97; Haugen (1957).

Faroese has expanded a range of deictic expressions, based apparently on similar concepts, e.g, Lockwood (1977: 57-64; 96-99); Wylie & Margolin (1981: 13-45) Thrainsson (2004: 184-87; 211-12). etc., offer detailed discussion of a bewildering variety of directional idioms used to refer to various points in the Faroes (many using the cardinal points of the compass), e.g.,

hersuðuri "here south" in Tórshavn (from the point of view of Klaksvík)
harnorðuri "there north" in Klaksvík (from the point of view of a speaker located in Tórshavn
yviri í Noregi "over (there) in Norway"

Faroese has extended this framework to refer to Denmark from the point of view of the Faroes:

herniðri "here-down" – "down here" a Faroese in Denmark;
harniðri "there-down" – "down there" in the Faroes referring to Denmark
niðrifrá "down-from" – "from below" from Denmark back to the Faroes[8]

6. CONCLUSION: THE "SMALL TRIBAL TONGUES" ISSUE. Trudgill (1992) juxtaposes linguistic developments in Faroese and Norwegian, arguing that languages spoken in small, isolated communities, such as the Faroes, tend to manifest all sorts of rare developments over the whole spectrum from phonetics to syntax. It should be noted, however, that Trudgill specifically describes Faroese as a language spoken by a small, isolated community, and asks whether such languages can ever evolve again in an increasingly globalising world, with correspondingly decreasing degrees of isolation.

Recently, mainly in the context of language death, there has been a great deal of discussion of what might be termed the "small tribal tongues issue" cf. e.g., Deutscher 2010: 235: "It is clear[er] to most linguists that the only languages that can truly reveal what is natural and universal are the hosts of small tribal tongues that do things very differently from what we are used to."

To some extent Faroese may be described as a "small tribal tongue", and the Faroes may still provide an accessible example of the increasingly rare situation described by De Vries et al. (2002: 124-25): "Until a few centuries ago, physically experienced space was for most people confined to an area of a few hours travel on foot - an area of, say 100 km^2. With ships, horses, and carriages, later trains and planes, physically experienced space has expanded to the whole globe for a significant fraction of the world's population... Even when people in ancient times thought they were drawing a map of the world, they could not possibly conceive of the entire planet in the way we can, nor could they locate their own position on the planet."[9]

[8] Two such Faroese expressions find parallels in Gaelic: *niðan* from-below > 'up', e.g., *niðan á Slættaratind* 'up Slættaratindur'; *oman* 'from above' > 'down', e.g., *hann datt oman* 'he fell down' (from sea-cliffs while fowling), recalling Scottish Gaelic *a nìos* and *a nuas* respectively. Faroese restricts the use of *niður* 'down' and *upp* 'up' to precipitous conditions.

[9] Much of the modern excellent communications and transportation infrastructure in the Faroes - roads, causeways, and tunnels (including the world's first undersea roundabout) – was built within not-so-distant living memory. Many communities were accessible only by small boat, or precipitous cliff paths. One interesting example is provided by the village of Trøllanes on Kalsoy - access to the neighbouring village of Mikladalur (fairly remote itself), let alone

We have seen above, therefore, that Faroese manifests a variety of complex, rare, developments over the whole spectrum of linguistics, from phonetics to syntax and beyond. At this stage, however, readers familiar with, e.g., Basque, Sorbian, or any of the Celtic languages, let alone minority native languages of, e.g., New Guinea, Australia, Africa, the Americas, all of which manifest a similar range of developments, may well ask what exactly is so special about Faroese?

The reason for giving Faroese prominence in an article such as this is that it is the least-spoken language that has actually succeeded in dominating a state, however small, as an official language. In this context it should always be borne in mind that the ongoing discussions of language death do not normally touch on Faroese, except in the context of noting that typological rarities similar to those described above might have emerged in Orkney, Fair Isle, Shetland, or Greenland, all West/Insular Scandinavian languages that would probably have developed along lines similar to Faroese if they had survived. This is even starker when we recall that within the Faroes, Faroese has fewer speakers than, e.g., Sorbian, and than all the Celtic languages apart from Cornish and Manx.[10]

REFERENCES

Á RYGGI, M. 1978. *Fuglabókin.* Tórshavn: Føroya Skúlabókagrunnur.

ANDERSEN, HENNING. 2003. On bifurcations and the Germanic consonant shifts. In *Language in time and space: A festschrift for Werner Winter on the occasion of his 80th birthday*, ed. by Brigitte L. M. Bauer and Georges-Jean Pinault, 19-33. Mouton de Gruyter: Trends in Linguistics. Studies and Monographs 144.

ANTTILA, RAIMO. 1989. *An introduction to historical and comparative linguistics*. 2nd ed. Amsterdam: John Benjamins.

BARNES, M. 1986. Reflexivisation in Faroese: A preliminary survey. *Arkiv för Nordisk Filologi* 101: 95-126.

---. 1987. Subject, nominative, and oblique case in Faroese. *Scripta Islandica* 37: 13-46.

DE VRIES, BERT, JODI DE GREEF, & ROBERT MARCHANT. 2002. Exploring the past: On methods and concepts. *Mappae mundi: Humans and their habitats in a long-term socio-ecological perspective*, 111-47, ed. by Bert de Vries & Johan Goudsblom. Amsterdam: Amsterdam University Press.

DELBRÜCK BERTHOLD. 1893. *Vergleichende Syntax der Indogermanischen Sprachen*: *Erster Teil,* Straßburg: Trübner.

DEUTSCHER, GUY. 2010. *Through the language glass: Why the world looks different in other languages*. New York: Metropolitan Books (Henry Holt and Company).

DIXON, ROBERT M. W. 1972. *The Dyirbal language of North Queensland*. Cambridge: Cambridge University Press.

HARBERT, WAYNE. 1983. Germanic reflexives and the implementation of binding conditions. In *Language change*, ed. by I. Rauch and G. Carr, 89-127. Bloomington: Indiana University Press.

anywhere else, involved either a rudimentary landing stage often buffeted by ten or twenty-foot waves, or a cliff path on which some people had to get roped together.

[10] Perhaps Guarani (Paraguay) and Maori (New Zealand) might also be considered from this angle.

HAUGEN, EINAR. 1957. The semantics of Icelandic orientation. In *Cognitive anthropology*, ed. by Stephen Tyler, 330-42. New York: Holt, Rinehart, and Winston.

HAVRÁNEK, BOHUSLAV. 1928. *Genera Verbi v slovanských jazycích*, Prague: Royal Society of Bohemia.

HENRIKSEN, JEFFREI. 1975. *LJÓÐLÆRA: Føroysk míllæra til framhalsskúlar I.* Tórshavn: Egið forlag.

JAKOBSEN J. 1978. *Føroysk Ævintýr*, Tórshavn: Føroya Lærarafelag

KRAUSE, WOLFGANG. 1963. *Handbuch des Gotischen*. Munich: Beck.

LASS, ROGER. 1975. How intrinsic is content? Markedness, sound change, and 'family universals'. *Essays on the Sound Pattern of English*, ed. by D. L. Goyvaerts & G. K. Pullum, 475-504. Ghent: E. Story-Scientia P.V.B.A.

LEHMANN, W. 1952, *Proto-Indo-European Phonology*. Austin: University of Texas Press.

---. 2004. Review of *Greater Anatolia and the Indo-Hittite Language Family*, ed. by Robert Drews. Washington: Institute for the Study of Man, 2000. *General Linguistics* 42: 1-4: 124-31.

LOCKWOOD, W. B. 1977. *An introduction to modern Faroese*. Tórshavn: Føroya Skúlabókagrunnur.

---. 1983. *Die Färöischer Sigurdlieder nach der Sandoyarbók. Mit Grammär und Glossar*. Tórshavn: Føroya Fróðskaparfelag.

MALING, JOAN. 1984. Non-clause-bounded reflexives in modern Icelandic", *Linguistics and Philosophy* VII: 211-41.

MIKLOSICH, FRANZ., 1883. *Vergleichende Syntax der Slavischen Sprachen*, Vienna: Braunmüller.

ORR, ROBERT. 2000. *Common Slavic nominal morphology*: *A new synthesis*, Indiana: Slavica.

SCHERER A. 1975. *Handbuch der Lateinischen Syntax*, Heidelberg: Winter.

SCHMIDT, ANNETTE. 1985. *Young people's Dyirbal.*

THRAINSSON, HOSKULDUR, HJALMAR PETERSEN, JÓGVAN/LON JACOBSEN, ZAKARIS SVABO HANSEN. 2004. Faroese: An overview and reference grammar, Torshavn: Føroya Fróðskaparfelag.

TOWNEND, MATTHEW. 2002. *Language and history in Viking Age England*: *Linguistic relations between speakers of Old Norse and Old English*. Turnhout, Belgium: Brepols.

TRUDGILL, PETER. 1992. Dialect typology and social structure. In Language contact: theoretical and empirical studies, ed. by E.H. Jahr, 195-211. Berlin: Mouton de Gruyter.

VAN DRIEM, GEORGE. 2001. *Languages of the Himalayas: An ethnolinguistic handbook of the greater Himalayan region, containing an introduction to the symbiotic theory of language.* Leiden: Brill.

VARÐIN. Nos. 39, 40, 41. Tórshavn: Varðin, 1973.

WATKINS, CALVERT. 1976. Towards Proto-Indo-European syntax: Problems and pseudo-problems. In *Papers from the parasession on diachronic syntax*, *CLS* 1976: 305-26.

WYLIE, JONATHAN, & DAVID MARGOLIN, 1981. *The ring of dancers. Images of Faroese culture.* Philadelphia: U of Penn Press.

This article was first published at www.lacussquare.org

LACUS Forum **39:1.19-36 (2025)**

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SYNCHRONIC EVIDENCE FOR A HISTORICAL HYPOTHESIS: VIETNAMESE PALATALS

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Abstract. Greenberg used to say that phonetic changes in progress are a good source of inspiration for historical sound changes. The ongoing merger of syllable-final palatal and alveolar consonants with velars in Vietnamese dialects provides support for changes in Proto Việt-Mường.

Key words: synchronic, diachronic, dialects, merger, sound change
Languages: Vietnamese, Proto Việt-Mường

OHALA (1992) REPORTS THAT SYNCHRONIC AND DIACHRONIC CHANGES parallel each other in various languages. For example, labialized velars in Indo-European become labials in Classical Greek, labialized velars in Proto-Bantu become labials in West Teke, and labialized velars in Proto-Zapotec become labials in Isthmus Zapotec. The final palatal and alveolar consonants in various dialects of Vietnamese are another interesting case of the diachronic-synchronic relationship in sound change and of sound change in progress, since we can document that Proto Việt-Mường palatals and alveolars are gradually being lost in coda position as they merge with velars.

In the literature on Vietnamese linguistics, palatals are said to be allophones of velars in Northern dialects, on the basis of various synchronic evidence, such as patterns in reduplication, symmetrical distribution of final consonants, and mutual phonetic effects between the vowel and final consonant. However, new evidence shows the gradual loss of palatals and alveolars in various dialects of Vietnamese. Data from under-examined dialects not only further support the hypothesis that palatals once occurred distinctively in Vietnamese but also provide the missing link in synchronic accounts that argue for palatals being allophones of velars.

Northern Vietnamese dialects, regarded as standard, include the speech of the Hà Nội city and eight surrounding provinces in the Red River Delta (Map 1, following page).

Map 1. *Regions of Vietnam (source: Wikimedia Commons).*

Phonetically, northern dialects have five places of articulation in final position: labial, (apico) alveolar, palatal, labio-velar, and plain velar. Labio-velars occur after back rounded vowels and are in complementary distribution with plain velars. Palatals occur only after [i], [e], and [a], and are in complementary distribution with velars, except after [a], where palatals contrast with velars. Moreover, neither palatals nor velars follow the short vowel [ɛ].[1] This situation results in the two asymmetric distributions shown in **Table 1**: i) although palatals occur after /i/ and /e/, they do not occur after [ɛ], and ii) [a] is the only vowel that occurs before both palatals and velars.

	c, ɲ	k, ŋ
i	+	-
e	+	-
ɛ	-	-
a	+	+

Table 1. *Distribution of final palatals after vowels in Northern dialects.*

[1] In this paper when the phonemic status of a sound is not yet clear, its IPA symbol is bracketed until its phonemic status is discussed. Examples are phonetically transcribed and placed in brackets. Tones are omitted.

Examples are given in (1).

(1) lính [liŋ] ‘soldier’
chênh [ceŋ] ‘tilted/different’
anh [ʔaŋ] ‘elder brother’
măng [maŋ] ‘bamboo shoot’

Thompson (1967) provides a history of Vietnamese palatals. Based on comparisons of Vietnamese with the Mường language, the closest sister of Vietnamese in the Việt-Mường subfamily, and of dialects spoken in North Vietnam (the Red River Delta) with those spoken in South Vietnam (Southeast and Mekong River Delta), he suggested that the original palatals from the Proto Việt-Mường were preserved in many Mường dialects, but in Vietnamese only after /i/, /e/, and /a/. Elsewhere palatals developed to alveolars in much the same way that the original palatals developed to alveolars after /i/, /e/, and /a/ in southern Vietnamese dialects, while original alveolars became velars elsewhere. Contrastive palatals of ancient Vietnamese, if there were any, are not documented. Thompson’s suggestion makes a few predictions: first, if palatals occurred after most vowels in Vietnamese, it is unlikely that they all disappeared together and at the same time in all dialects. Second, in southern dialects, although alveolars merge with velars after certain vowels, alveolars might still occur and contrast with other consonants.

Data from understudied dialects spoken in the South Central Coastal region of Vietnam confirm these predictions and offer a picture of sound change in progress. Field work in Vietnam in 2012 revealed a fascinating pattern of occurrence of final palatals in the speech of the Hoài Nhơn District in the Bình Định province, and the speech of Hòa Quang Bắc village in Phú Yên province. In the Bình Định and Phú Yên dialects, palatals are found after the short vowel [ɛ]. In the Quảng Nam and Bình Định dialects palatals occur after /i/ and /e/ and contrast with alveolars; elsewhere alveolars merge with velars. Such data clearly show that the historical palatal is disappearing.

This paper makes the following claims: first, there are historical palatal consonants in the Vietnamese coda, and they are disappearing. Second, historical alveolar consonants are also disappearing, merging with velars syllable-finally in Central and Southern dialects. Finally, mass immigration from the area of north central to central and south central Vietnam could be a factor in the change.

Section 1 presents a discussion of the phonemic status of final palatals. Section 2 shows the sound change in progress involving the disappearance of historical palatals and alveolars. Section 3 shows that the form [ɛŋ], hypothetical in Northern dialects, is indeed found in the speech of Bình Định and Phú Yên provinces. Section 4, using patterns of immigration, explains the old linguistic features found in the new land. Section 5 is the conclusion.

1. THE PHONEMIC STATUS OF FINAL PALATALS AND THEIR HISTORICAL DEVELOPMENT. This section presents background information about the debate and discusses the historical view of the development of final palatals in Vietnamese.

Table 2 shows the phonemic vowel inventory of the Hà Nội dialect. In this paper, Hà Nội, the standard dialect, represents Northern dialects spoken in Hà Nội and surrounding provinces in the Red River Delta. There are eleven vowels and two diphthongs. Two vowels contrast in length: /a/ and /ə/. Long vowels can occur in either open or closed syllables. Short vowels occur only in closed syllables. All back vowels are rounded. Three diphthongs can occupy the nucleus.

	Front	Central	Back
high	i	ɨ	u
mid	e	ə ə:	o
low	ɛ	a a:	ɔ
diphthong	iə	ɨə	uə

Table 2. *The phonemic vowel inventory of the Hà Nội dialect.*

Eight consonants, [p, t, c, k͡p, m, n, k], and [ŋ͡m], and two glides, [w] and [j], can occur syllable-finally. Palatals occur only after [i], [e], and [a], and contrast with velars after the short [a]. Plain velars occur elsewhere, except they contrast with palatals after the short [a]. Labio-velars, [k͡p] and [ŋ͡m], occur only after back rounded, short vowels. It is important to note that vowels preceding palatals and labio-velars are always short. **Table 3** shows the phonetic distribution of palatals and velars. Labial place of articulation is omitted. In Table 3 only alveolars occur after the short vowel [ɛ], e.g., *đen* [dɛn] 'black', and only plain velars occur after the long vowel [ɛ:], e.g., *xẻng* [sɛ:ŋ] 'shovel'. Because there is no length contrast in [ɛ], the long [ɛ:] is not regarded as phonemic in the literature.

	t/n	c/ ɲ	k͡p / ŋ͡m	k/ŋ
i	+	+	-	-
e	+	+	-	-
ɛ	+	-	-	-
ɛ:	-	-	-	+
ɨ	+	-	-	+
ə:	+	-	-	+
ə	+	-	-	+
a:	+	-	-	+
a	+	+	-	+
u	+	-	+	-
o	+	-	+	-
ɔ	+	-	+	-
iə	+	-	-	+
ɨə	+	-	-	+
uə	+	-	-	+

Table 3. *Phonetic distribution of alveolars, palatals and velars in the Hà Nội dialect.*

Table 1 and **Table 3** show the two asymmetrical patterns: i) [a] is the only vowel that contrasts palatals and velars, and ii) neither palatals nor velars follow the short vowel [ɛ].

The asymmetrical pattern in the distribution of palatals created a long debate about the underlying forms of final palatals and the relevant vowels: should the final palatal be included in the final inventory or is it an allophone of a velar? The absence of palatals after [ɛ] raises the issue of whether *anh* [ʔaŋ] 'elder brother' is phonemically /ʔaŋ/ or /ʔɛŋ/. There are two major views with some variations. The first view argues that palatals are phonemic and should be included in the final inventory, i.e., *anh* [ʔaŋ] is /ʔaɲ/. The second view argues that palatals are allophones of velars in final position, i.e., *anh* [ʔaŋ] is /ʔɛŋ/. Each view affects the number of vowels with length

contrast in the inventory (see Cao 1998 and Đoàn 1977 for detailed reviews). The latter view is overwhelmingly adopted (e.g., Đoàn 1977, Vương & Hoàng 1994, Nguyễn 1997, Cao 1998, Hoàng 1989) because it produces a symmetrical pattern of distribution: palatals occur after all three front vowels and velars occur elsewhere.

The first view, although no longer in favor nor adopted in the literature, is worthy of mention because of the historical hypothesis discussed later. This view is reflected in the official orthography. The letters *ch* and *nh* are used to write the palatals, as in *sách* [sac] 'book', *anh* [ʔaɲ] 'elder brother', and *c* and *ng* are used for velars, as in *khác* [xa:k] 'different' and *mang* [ma:ŋ] 'to carry'. Authors holding this view maintain that the palatal in these syllables is phonemic; however, they disagree among themselves on whether the vowel is phonemically /a/ or /ɛ/. Some authors identify it as underlyingly /a/, e.g., [ʔaɲ] is /ʔaɲ/, (Lê Văn Lý 1948, Thompson 1965). This view creates the two asymmetrical patterns mentioned above. To solve the distributional problem, other authors identify the vowel as underlyingly /ɛ/, e.g., [ʔaɲ] is /ʔɛɲ/ (Emeneau 1951). Another problem occurs: palatals are said to have phonemic status, but they are now in complementary distribution, as seen in **Table 4**. In **Table 4** palatals follow three front vowels and velars follow non-front vowels.

			Finals
i	e	ɛ [aɲ]	/c, ɲ/
ɨ	ə	a	/k, ŋ/
u	o	ɔ	/k, ŋ/

Table 4. *Distribution of phonemic palatals syllable-finally in the first view.*

The second view argues for final palatals to be allophones of velars (e.g., Haudricourt 1954, Đoàn 1977, Cao 1998, Cù et al 1977, Hữu & Vương 1980, Hoàng 1989, Nguyễn 1997). This view is widely adopted in the modern literature. Supporters argue for a system with a symmetric distribution of final consonants based on a phonological process such as reduplication (Đoàn 1977:210). As shown in **Table 5,** this view produces a symmetric distribution of final palatals in which palatals surface after all three vowels, and /a/, like any other non-front vowel, occurs only before velars, i.e., [aɲ] is underlying /ɛŋ/. Palatals are in complementary distribution with velars. Examples in (1) are repeated in (2) with the underlying forms (see Đoàn 1977 for details).

	[c, ɲ]	/k, ŋ/
/i/	+	-
/e/	+	-
/ɛ/	+	-
/a/	-	+

Table 5. *Phonemic distribution of palatals and velars in the Hà Nội dialect.*

(2) lính [liɲ] /liɲ/ 'soldier'
chênh [ceɲ] /ceɲ/ 'tilted/different'
anh [ʔaɲ] /ʔɛŋ/ 'older brother'
măng [maŋ] /maŋ/ 'bamboo shoot'

Our focus is the low front /ɛ/ being centralized before palatals. Phonetically, the general

assumption is short vowels show a strong effect on final velars. For example, after the three back rounded vowels /u/, /o/, and /ɔ/, the velar becomes labialized, e.g., *chung* [cuŋ͡m] 'shared', *ốc* [ʔok͡p] 'snail', and *ong* [ʔɔŋ͡m] 'bee', and the vowel is short, less rounded. Similarly, the front vowels /i/, /e/, and /ɛ/ before a palatal are short, pulled toward the central area. The mutual relationship between the vowel and final consonant is shown in (3), on the basis of Cao 1998's illustration.

(3) Mutual effects between front vowels and final velars

lính	*[liŋ]	⇒	*[liʲɲ]	⇒ [liɲ]	'soldier'
chênh	*[ceŋ]	⇒	*[ceʲɲ]	⇒ [cəʲɲ]	'unequal'
anh	*[ʔɛŋ]	⇒	*[ʔɛʲɲ]	⇒ [ʔɜʲɲ]	'elder brother'

The asterisk illustrates the reconstructed forms. The first stage is the input. In stage 2, a velar following a front vowel is palatalized and surfaces as a palatal. In Stage 3, the front vowel and palatalized consonant are adjacent with similar features, and the front vowel dissimilates and is centralized. ([ɜʲɲ] is transcribed as [aɲ] in other accounts, be it phonetic or phonemic.) The centralization of /ɛ/ is stronger than that of /i/ and /e/ before palatals. In the Sài Gòn dialect, a southern dialect spoken in Hồ Chí Minh city and surrounding areas, centralization strongly changes vowel quality in all front vowels, e.g., Northern *lính* [liɲ] 'soldier' and *ếch* [ʔec] 'frog' are pronounced as [lin] and [ʔɤ:t], respectively. Phạm 2006 offers a similar account using feature geometry. In these analyses, [ɛɲ] or [ɛc], is one of the reconstructed forms of /ɛŋ/ or /ɛk/. Neither [ɛɲ] nor [ɛc] occur in any major dialects. However, as we will see below, in the Bình Định and Phú Yên dialects [ɛɲ] and [ɛc] do exist, serving as a link to connect the underlying form /ɛŋ/ with the surface [aɲ] in northern dialects in a synchronic explanation. Moreover, this form, [ɛɲ], also serves as evidence for the loss of the final palatals in Vietnamese.

Cao (1998:95) makes the interesting remark that the relationship between front or back vowels and velar consonants, although synchronic, could have originated from a *diachronic process* in which "only some stages are confirmed in dialects". These stages are indeed found in many dialects in South Central Coast which show the loss of final palatals and alveolars in Vietnamese.

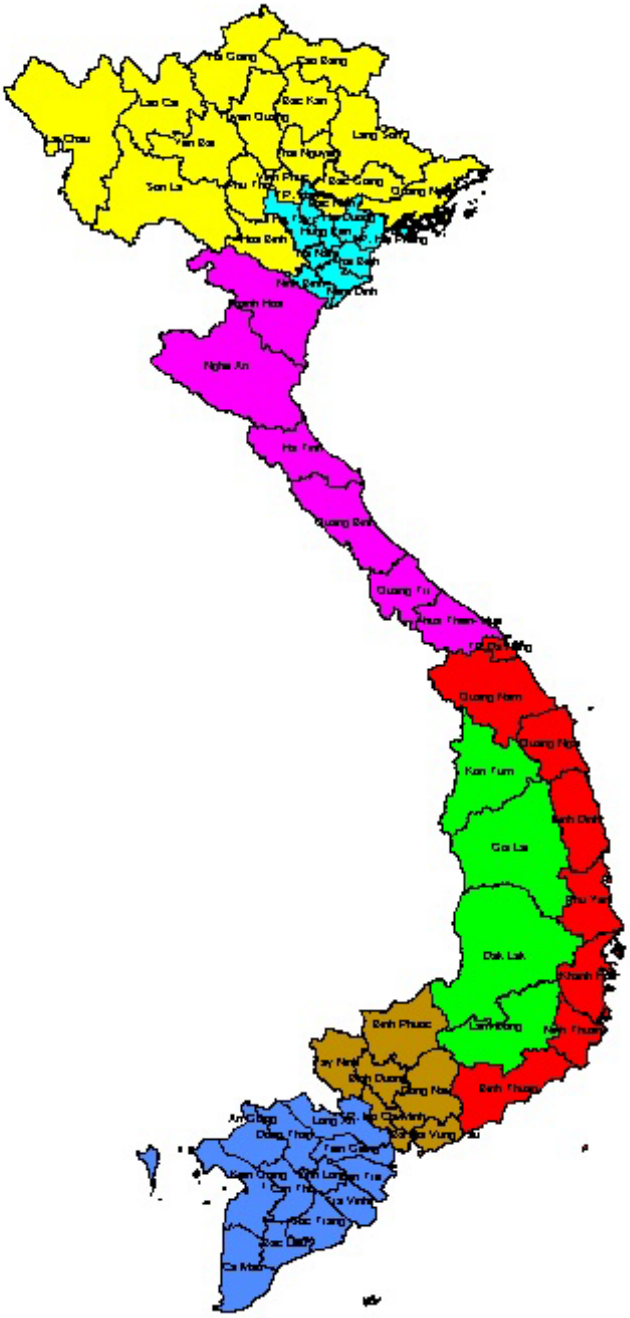
Comparative data from the Mường speakers, who live in mountainous provinces in North Vietnam, and from the Quảng Nam, Bình Định, and Phú Yên speakers living along the coastline in South Central Vietnam support the process of sound change: final palatals are disappearing along with final alveolars.

The following sections will show preliminary results of production and perception tests which demonstrate that in some South-Central dialects, palatals are still preserved and contrast with alveolars after three front vowels. Which vowel(s) occur(s) depends on the dialect. Interestingly in these dialects the process of Hà Nội alveolars becoming velars, seen in southern dialects, also takes place. This fact tells us that both palatals and alveolars are disappearing.

2. REMNANTS FROM THE PAST: FINAL ALVEOLARS AND PALATALS IN THE QUẢNG NAM, BÌNH ĐỊNH, AND PHÚ YÊN DIALECTS.

The field work in 2012 in Quảng Nam, Bình Định, and Phú Yên in South Central Coast of Vietnam shows a very interesting phenomenon (Map 2, following page): the dialects are 'mixed.' First, in other dialects in Central and South-Central Vietnam the Hà Nội palatals completely disappear, becoming alveolars. However, in the Quảng Nam, Bình Định, and Phú Yên dialects, the Hà Nội palatal becomes an alveolar only after [a] but is retained after [i] and [e] in the Quảng Nam and Bình Định dialects, and after [ɛ] in the Bình Định and Phú Yên dialects.

Second, like other dialects of Central (from Hue southwards) and South Vietnam, Hà Nội alveolars become velars after non-front vowels. The surviving palatals make Quảng Nam, Bình Định, and Phú Yên conservative dialects, like northern dialects. The loss of alveolars after non-front vowels is a new development, and groups Quảng Nam, Bình Định, and Phú Yên among innovative dialects, those that were formed during the last few centuries in the new territories. This 'mixed' distribution of palatals and alveolars in the Quảng Nam and Bình Định dialects documents a sound change in progress in Vietnamese: palatals and alveolars in the coda are disappearing.



Map 2. *Provinces of Vietnam* (Haughton & Nguyễn 2004)

For the production test, the data from Quảng Nam dialects were collected during field work conducted in Vietnam in 2004 and 2012. The data from the speech of Hoài Nhơn and Phù Cát districts of the Bình Định province, and of Hòa Quang Bắc of the Phú Yên province, were collected during field work in Bình Định and Phú Yên in 2012. The production test used pictures to elicit the relevant syllables in monosyllabic and disyllabic words and also in interviews.

The production test used a list of 178 words consisting of all possible Vietnamese rhymes. The majority of words are monosyllabic. The recorded tokens were transcribed by the author.

There were three Bình Định speakers: a female and a male from Hoài Nhơn district, and a male from Phú Cát district, all students in their early twenties. The speech of the Phú Cát male sounds slightly different from the two Hoài Nhơn speakers, differing from the rhymes pronounced as [ɛŋ] by the two Hoài Nhơn speakers. This section reports the results of the production test from the two speakers of Hoài Nhơn, as they show consistency, although the subjects come from different villages. Hoài Nhơn district is located near the coastline; residents live in isolated fishing villages. The Phú Cát district is located closer to Quy Nhơn city and on National Highway 1, which could be a factor for residents here adopting a more urban pronunciation. The perception test, however, includes results from listening to the Phú Cát speaker. For the Phú Yên dialect, two females in their early forties were used for data elicitation. They are small business owners in the Hòa Quang Bắc village, and their speech also shows consistency within and across speakers.

In order to avoid a reading effect, pictures were used to elicit these 178 syllables. The subjects were asked to say the name of the objects on the screen, one object at a time. Ambiguous pictures were avoided in order to reduce unwanted synonyms. The majority of the test words were nouns, referring to familiar objects in daily life: tools, flowers, plants, numbers, furniture, colors, nature events, etc. This method made it difficult to elicit available minimal pairs but easy for the subjects to identify the picture with just one quick choice of word. The words were put in two lists in a random order, i.e., two repetitions for each syllable. The same syllable/word was represented with a different picture in each list. The pictures in the two lists were displayed on a laptop screen as slide shows to elicit the test words. When ambiguity appeared or the subject offered more than one word to name a picture but still failed, the correct word appeared on the screen and the subject was asked to read it out loud for the recording. This method was used to get the most natural and quickest reaction from the subject without any orthographic bias. Sounds were recorded using the Audacity program with an iMic microphone connected to a Macbook Pro laptop. The subjects were told what to do, then looked at the pictures on the laptop screen, and named the picture. The sample rate was set at 44kHz.

In addition to naming the objects, each subject was interviewed for a few minutes and recorded. Relevant syllables from the interviews were isolated and transcribed to check against tokens elicited in the picture naming task.

Although the list includes all rhymes, we will discuss only syllables with final alveolars and palatals after front vowels and [a]. The description of the entire sound system of these dialects is outside the scope of this paper.

Let us first look at how alveolars are disappearing in dialects of central and southern Vietnam. Comparative data of Hà Nội (a representative northern dialect) and Sài Gòn (a representative southern dialect) are given below in (4). Transcription is phonetic. The Hà Nội velars correspond to Sài Gòn velars in all environments, which are not included in (4). The Hà Nội alveolars correspond with the Sài Gòn velars (4f – n). After [i], [e] and [a] both Hà Nội alveolars and palatals correspond with the Sài Gòn alveolars (4a-e).

(4) Comparative data of the Hà Nội and Sài Gòn dialects

	Orthography	HÀ NỘI	SÀI GÒN	Translation
a.	*xin*	sin	sɨn	to ask for
b.	*lính*	liŋ	lɨn	soldier
c.	*lên*	len	ləːn	up
d.	*ếch*	ʔec	ʔəːt	frog
e.	*anh*	ʔaŋ	ʔan	to eat
f.	*đen*	dɛn	dɛːŋ	black
g.	*mứt*	mɨt	mɨk	jam
h.	*ớt*	əːt	əːk	pepper
i.	*mất*	mət	mək /mak	to lose
j.	*cát*	kaːt	kaːk	sand
k.	*cắt*	kat	kak	to cut
l.	*hút*	hut	huk͡p	to suck
m	*tốt*	tot	toːk͡p	good
n.	*ngọt*	ŋɔt	ŋɔːk	sweet

Thompson 1967 mentions a similar pattern between Vietnamese and the Mường Khen dialect, where palatals contrast with alveolars and velars after most vowels. He says that where the Mường Khen dialect has final palatals, northern Vietnamese dialects have alveolars, much like the relationship of Hà Nội palatals to the Sài Gòn alveolars. The data in (5) are from Thompson 1967, supplemented with (5h – m) from Baker & Baker 1970. (5a-m) show that after [əː, aː, a, e, ɛ, u, o], and [ɔ] Mường final palatals correspond to Vietnamese alveolars. Interestingly, Mường [ɛŋ] and [ɛc] correspond to (northern) Vietnamese [aŋ] and [ac], as in (5n-p).

(5) Comparison of final palatals and alveolars in Mường and Vietnamese

	Viet orthography	MƯỜNG	VIETNAMESE	Translation
a.	*bán*	paːɲ	baːn	to sell
b.	*sàn*	saːɲ	saːn	floor
c.	*cát*	kaːc	kaːt	sand
d.	*bắn*	paŋ	ban	to shoot
e.	*cắn*	kaŋ	kan	to bite
f.	*lên*	tleŋ	len	up
g.	*đến*	teŋ	den	to arrive
h.	*rút*	ruc	zut	to withdraw
i.	*bớt*	pəːc	bəːt	to diminish
k.	*một*	moc	mot	one
l.	*mọt*	mɔc	mət	termite
m.	*ruột*	rɔc	zuət	intestine
n.	*anh*	ʔɛŋ	ʔaŋ	elder brother
o.	*rách*	rɛc	zac	be torn
p.	*cành*	kɛŋ	kaŋ	branch

From this correspondence, Thompson concludes that the original palatals (in the ancestor of Viet-

Mường) that occurred after many vowels are still preserved in Mường, but in Vietnamese, palatals remain only after front vowels. Elsewhere they developed to alveolars (i.e., apicals in Thompson), in the Hà Nội dialect.[2] Thompson's suggestions have not received any further discussion. However, his comparison of palatals with alveolars, not with velars, is interesting.

Like other dialects spoken in Central and South Vietnam, the Quảng Nam, Bình Định, and Phú Yên dialects also lost alveolars in the final position. Alveolars, which correspond to the Hà Nội palatals, occur only after three short vowels [i], [e], and [a], shown in **Table 6**, examples given in (6). However, unlike other dialects, the palatals are still found after short vowels, creating a contrast with alveolars, but varying depending on dialects: both alveolars and palatals occur after the front vowels [i] and [e] in Quảng Nam and Bình Định dialects, and after [a] in Phú Yên dialect. Alveolars do not follow [ɛ].

	t, n	c, ɲ	k, ŋ
i	+	+ (QN, BD)	
e	+	+ (QN, BD)	
ɛ		+ (BD, PY)	
a	+ (QN, BD, PY)		+

Table 6. *Distribution of final alveolars and palatals in the Quảng Nam, Bình Định and Phú Yên dialects.*

(6) đinh [dɨn] 'nail'
chin [ciɲ] 'nine'
sên [sen] 'snail'
lên [leɲ] 'go up'
ăn [ɛɲ] (Bình Định, Phú Yên) 'to eat'
cánh [kan] 'wing'
nhẫn [ɲaŋ] 'ring'

The fact that alveolars occur after short [a] but not short [ɛ] creates a similar asymmetry to that seen in the Hà Nội dialect. If, as in the Sài Gòn dialect, assuming [a] (phonetically more like [ɜ] or [ɐ]) before alveolars is underlyingly /ɛ/, the alveolars occur only after 3 front vowels: /i/, /e/, and /ɛ/. Elsewhere velars/palatals occur. **Table 7** shows this symmetric distribution. Palatals are retained after all three front vowels in the Bình Định dialects.

[2] In (5f) and (5g) the alveolars must be original alveolars in the Hanoi dialect, where alveolars contrast with palatals.

	t, n	c, ɲ	k, ŋ
i	+	+ (QN, BD)	
e	+	+ (QN, BD)	
ɛ	+ (QN, BN, PY)	+ (BD, PY)	
a			+

Table 7. *Phonemic distribution of final alveolars and palatals in the Quảng Nam, Bình Định, and Phú Yên dialects.*

Because both alveolars and palatals occur in complementary distribution with velars, alveolars and palatals cannot both be phonemes in these dialects. Either alveolar or palatal can be said to be an allophone of velars while the other is phonemic. If the alveolar consonant is allophonic and the palatal consonant is a phoneme, we can assume palatals are remnants of the historical palatals after /i/ and /e/ in the Quảng Nam and Bình Định dialects, and after /ɛ/ in the Bình Định and Phú Yên dialects.

Alternatively, one can say the final palatal is an allophone of velars and the final alveolar is phonemic. In the Quảng Nam and Bình Định dialects palatals occur only after /i/ and /e/ and are in complementary distribution with velars, so we can assume that palatals are allophones of velars and that the alveolar after [i], [e], and [a] is a phoneme, a historical remnant from Northern dialects. However, it would be hard to explain why alveolars are lost after most vowels. Moreover, in Southern dialects from Hue southward alveolars are consistently found after [i], [e], and [a], but palatals are completely lost in these dialects.[3] The palatals that survive in South Central are found after various front vowels and in different sub-dialects. It is unlikely that alveolars are historical remnants and palatals are allophones in these dialects. Palatals seem best treated as remnants from the past.

The fact that in the Quảng Nam, Bình Định, and Phú Yên dialects Northern palatals are still retained but alveolars are lost also suggests that these dialects are a hybrid type, falling in a peripheral area where the old features are still seen but innovative features have already emerged. This phenomenon further supports a hypothesis of gradual disappearance of final palatals in modern Vietnamese.

Besides final palatals, another dinosaur feature we are able to trace is the surfacing of the short vowel [ɛ] before a palatal, i.e., [ɛɲ]. Historically, if the final palatal in modern Vietnamese is a relic of palatals from the ancestor of the Việt-Mường, then we might be able to find some Vietnamese dialects in which palatals still occur after [ɛ]. Indeed, the rhymes [ɛɲ] and [ɛc] are found in the dialects spoken in Bình Định and Phú Yên provinces, South Central Vietnam, which are discussed in the next section.

3. THE MISSING LINK: PALATALS AFTER [ɛ]. Although researchers today adopt the view that northern *anh* [ʔaŋ] ‘elder brother’ is underlyingly /ʔɛŋ/ based on both phonetic and phonemic grounds, not

[3] Among children born to Northern parents living in south Vietnam, or children who left north Vietnam during their childhood to live in South Central and South Vietnam and still speak with a northern accent, the first feature that is lost in their speech is final palatals when all other features might still be preserved, e.g., final alveolars after all vowels, or tone *ngã* (glottalized, rise-fall).

everyone agrees on how the process works when both the vowel and consonant on the surface are different from the input in the underlying form. In northern dialects it is said that the vowel does not clearly sound like [a] or [ɛ] but is something in between, and that the final palatal is produced a little further back than when it occurs in the onset, e.g., compare *lính* [liɲ] 'soldier' and *nhìn* [ɲin] 'to look at'. This is because the palatal is indeed a palatalized velar. Neither the vowel nor the final consonant in this rhyme is phonetically clear. The rate of confusion from the perception test confirms this observation.

Two tests, production and perception, were conducted to confirm the findings involving [ɛɲ] and [ɛc]. The results show that speakers of both the Hoài Nhơn (Bình Định) and Hòa Quang Bắc (Phú Yên) dialects have the rhymes [ɛɲ] and [ɛc] in their speech, something not seen in any of the well-studied dialects.

3.1. PRODUCTION TEST. The words containing [ɛɲ]/ [ec] elicited in the production test and used in the perception test are shown in (7).

(7) Words with [ɛɲ]/ [ɛc] in the Hoài Nhơn (Bình Định) and Hòa Quang Bắc (Phú Yên) dialects.

a. chén	[cɛɲ]	'small bowl'
b. đèn	[dɛɲ]	'lamp'
c. sen	[sɛɲ]	'lotus'
d. xẻng	[sɛɲ]	'shovel'
e. sét	[sɛc]	'lightning'
f. kẹt	[kɛc]	'to jam'
g. ăn	[ɛɲ]	'to eat'
h. trăn	[ʈɛɲ]	'python'
e. rắn	[ɻɛɲ]	'snake'
g. măng	[mɛɲ]	'bamboo shoot'
k. lăng	[lɛɲ]	'mausoleum'
l. trăng	[ʈɛɲ]	'moon'
m. răng	[ɻɛɲ]	'tooth'
n. trắng	[ʈɛɲ]	'white'
o. xăng	[sɛɲ]	'gas'
p. mắt	[mɛc]	'eye'

In the production test, the final consonant in words in (7) produced by speakers of the Bình Định and Phú Yên dialects sometimes sound like something between a palatal and velar.[4] To be consistent, because palatals and velars do not contrast after [ɛ] in any dialect, the IPA symbols for palatals are used here to represent the final consonant in this rhyme. However, the vowel in (7) is clearly [ɛ].

In order to confirm that the rhyme produced by speakers of Bình Định and Phú Yên dialects is [ɛŋ] or [ɛɲ] but not [aɲ], which exists in the Hà Nội dialect, a perception test was used as a follow up to the production test.

[4] Ladefoged (2003:160) states that "the place of articulation of consonants as traditionally defined is not readily apparent through acoustic analysis". Rather, he advises "you can do much better with the simple palatography technique . . . or even by just looking at the speaker's mouth".

3.2. PERCEPTION TEST. The word file used for the perception test was excerpted from the recordings of the production test. The perception test was designed to see how speakers of other dialects perceive words in (7) spoken by the Phú Cát speaker (Bình Định province) and of the two Hòa Quang Bắc speakers (Phú Yên province). The recorded speech of these speakers was chosen for the experiment because the recordings are very clear, with minimal background noise. The speech of the Hoài Nhơn speaker (Bình Định) was also used, but with only four listeners, and the results were diverse. Therefore, the discussion focuses only on the results of the speech of the Phú Cát and Hòa Quang Bắc speakers. (Due to the limited time, the perception test was not given to speakers of the same dialects.)

Only three to five words in (7) from each speaker were selected, segmented, and saved in individual files, then played to listeners. Each token was played three or four times. The listener was asked to write down what he/she heard, using the official orthography. The perception test was performed in two cities: Đà Nẵng (South Central Coast) and Hồ Chí Minh (Southeastern region). Beside natives of these cities, listeners included those who had come from various provinces to work there. The results show the confusion of speakers when listening to these words.

Before looking at the results in **Table 8**, we should note some points about the writing system. The Vietnamese orthography, using a Roman script, was created by Western missionaries in the 17th century for the purpose of learning the local language in order to preach. The script was not used officially until the late 19th century, and from the mid 20th century it became the only writing system of the nation, called "the National Script". The orthography represents the sound system of the northern dialects plus three initial retroflexes, /ʈ/, /ɽ/, and /ʂ/, found in other dialects. Recall that letters *ch* and *nh* are used to write the palatal stop and palatal nasal, respectively, i.e., *inh* for [iɲ], *ênh* for [eɲ], *anh* for [aɲ], *ich* for [ic], *êch* for [ec], and *ach* for [ac]. A long vowel before a velar is written with two identical letters, but this convention is not always consistent. For example, *ôông* is used for [oːŋ], *oong* for [ɔːŋ], but [eːŋ] and [ɛːŋ] are written with only one letter, *ê* and *e,* respectively*,* as in *(côông) kêng* [keːŋ] 'to carry someone on shoulders', and *xẻng* [sɛːŋ] 'shovel'. This inconsistency creates some problem with the test's design: the words in (7) are pronounced with [ɛ] before [ɲ] or [ŋ] in the Bình Định and Hòa Quang Bắc dialects, but there is no official combination in the orthography to write this rhyme, which does not exist in other dialects. The listeners were told to use any letters that best represent the sounds they hear, even if the sounds were nonsense and the combination of letters did not look familiar. When the subject heard [ɛŋ] or [ɛɲ], the most appropriate combinations of letters to choose are *eng* or *enh*, respectively; however, in the orthography *eng* is used to write a rhyme with the long [ɛː] before a velar, as in *xẻng* [sɛːŋ] 'shovel', and the combination *enh* is not used in the orthography, although it would be the most logical orthographic representation for the combination of the vowel and consonant in this rhyme. Only one token was written with *enh*. The orthographic convention was a drawback of the test, as it would have been unreasonable to ask a subject to write down a combination that has no equivalent representation in the orthography. (Future research should find a better design for a test with a similar purpose.)

Even with the orthographic problem, we can still predict that if the sound they heard is not familiar to them the listeners would be confused and try various existent combinations to write down what they hear. If inconsistency is found among subjects, it shows that the sound is not how it is pronounced in the dialects the subjects are acquainted with. This prediction turned out to be correct.

Let us now look at the results when the speech of the Phú Cát speaker was played. Ten listeners, age ranged from early 20s to late 50s, speakers of the Quảng Nam dialect, participated in the test.

The subjects were not told which dialect they were going to listen to. Five monosyllabic words selected from the Phú Cát speaker transcribed based on the northern dialects are: *răng* [zaŋ] 'tooth', *ăn* [an] 'to eat', *trắng* [caŋ] 'white', *sắn* [san] 'yucca', and *mắt* [mat] 'eye'. These words are pronounced with the short vowel [a] in northern dialects, but the short [ɛ] before a palatal in the Phú Cát dialect. Ten subjects produced 50 tokens. **Table 8** shows this results. The first column gives the orthography used by the subjects to record how they perceived the sounds. The phonetic transcription of the first column, based on the northern pronunciation, is given in the second column. The last column shows the number of tokens for each combination, i.e., 39 tokens from any of the five syllables were perceived as *anh* [aŋ].

Orthography	Transcription	%	Total: 50
ên	[en]	6	3
anh	[aŋ]	78	39
eng	[ɛ:ŋ]	6	3
ăng	[aŋ]	6	3
Other		4	2

Table 8. *Results of 10 subjects listening to răng, ăn, trắng, sắn, and mắt in the Phú Cát speech.*

Overall, the Quảng Nam listeners used many ways to write down what they heard: combinations *inh* for [iŋ], *anh* for [aŋ] and *eng* for [ɛ:ŋ] were used most frequently. The combinations *in* [in], *ên* [en], or *en* [ɛn] were also used but much less frequently.

Table 8 shows 78% of occurrences of [ɛŋ] or [ɛŋ] heard as *anh* [aŋ]. Note that all the syllables in (7) are pronounced with the long [ɛ:] in the Quảng Nam speech, which is the dialect of the listeners. Interestingly, even though the Hà Nội short [a] in (7) corresponds to the Quảng Nam long [ɛ:], the Quảng Nam listeners still used the short [a] for what sounds more like [ɛ] than [a]. This could be an orthographic influence.

Nine subjects, ages ranging from the early twenties to late fifties, listened to the data produced by the Hòa Quang Bắc speaker. Among these, four are from Đà Nẵng city (whose dialect is similar to the Quảng Nam dialect), and five are from Hồ Chí Minh city (Sài Gòn dialect). Four monosyllabic words selected from (7) were played. These syllables again are pronounced with the short [a] in Northern dialects: *trăng* [caŋ] 'moon', *măng* [maŋ] 'bamboo shoot', *sắn* [san] 'yucca', and *khăn* [xan] 'scarf'. Results are shown in **Table 9**. Nine listeners with four words produced 36 tokens. We see again that [aŋ] has the highest score, 31%, although not overwhelmingly so, as in the case of Phú Cát speaker.

Orthography	Transcription	%	Total 36
ăn	[an]	3	1
anh	[aŋ]	31	11
eng	[ɛ:ŋ]	19	7
inh	[iŋ]	19	7
i	[i]	14	5
other		14	5

Table 9. *Results of 9 subjects listening to 4 words in Hòa Quang Bắc: trăng, măng, sắn, and khăn.*

The listeners to the Hòa Quang Bắc speaker seemed to be more puzzled than those listening to the Phú Cát speaker. They also used [i] in a relatively high number of tokens, either with a final palatal (19%), or in open syllables (14%). Perhaps the Hòa Quang Bắc speaker pronounced the vowel in [ɛŋ] with a much narrower opening and a higher tongue position than for the usual [ɛ].

In both cases, it is interesting that *anh* [aŋ] was overwhelmingly the choice. Note that the Northern *anh* [aŋ] is pronounced with an alveolar, [an], in South Central and Southern dialects. In order to determine whether when the subject wrote *anh,* they really meant the northern pronunciation [aŋ], a number of monosyllabic words pronounced with the northern [aŋ] were included in the test, e.g., *cánh* [kaŋ] 'wing'*, gạch* [ɣac] 'brick'*, hành* [haŋ] 'onion'. All these syllables were correctly written with the rhymes [an] and [at], just as they are pronounced in the subjects' dialect. Therefore, the final consonant in tokens written as *anh* in **Table 8** and **Table 9** is certainly not perceived as an alveolar by these listeners.

It is also interesting to note that when the subjects used the combination *anh* to record most of these words they probably indicated that the vowel is short, because *nh* occurs only after short vowel. On the other hand, because the vowel sounds more like [ɛ], which can only precede *ng* (a velar) but not *nh*, a palatal, in the official orthography, some speakers used *eng*, although *eng* is used to write the rhyme with a long [ɛ:] before a velar in the orthography. The fact that listeners used various spelling to write down what they heard suggested that they were not satisfied with any of these spellings.

In summary, the bewilderment of listeners in finding the 'correct' spelling to write the rhymes [ɛŋ] and [ɛc] clearly shows that this is not what they are familiar with in their dialects or in any other dialects they know.

Table 10 summarizes the distribution of final palatals after front vowels in the dialects discussed so far, in the order from north to south. We see that the further south the dialect, the less chance for final palatals to survive. Whereas palatals occur after three vowels in northern dialects, they are completely lost in Sài Gòn and all other southern dialects.

		i	e	ɛ
NORTH	Hà Nội	X	X	X
	Quảng Nam	X	X	
⇓	Bình Định	X		X
	Phú Yên			X
SOUTH	Sài Gòn			

Table 10. *Distribution of palatals after front vowels.*

Palatals occur after all front vowels in the Hà Nội dialect. In other dialects palatals are either retained after two front vowels, or only after /ɛ/ in the Phú Yên dialect. Those surviving palatals become alveolars in most dialects of central and southern Vietnam.

The occurrence of the palatal after /ɛ/ in the Bình Định and Phú Yên dialects could result from patterns of mass migration from north central to central and south central Vietnam, as we will see in the next section.

4. HISTORICAL PALATALS AND IMMIGRATION TO CENTRAL AND SOUTH CENTRAL FROM NORTH CENTRAL VIETNAM. This section examines the pattern of immigration during five centuries, from 14th to 19th centuries, which might be responsible for the palatals after front vowels in the dialects discussed in this paper. The migration of the Vietnamese people from north central to central and

south central Vietnam carried with it archaic features of the language to the new lands.

The territory of current central Vietnam belonged to the Champa kingdom for seventeen centuries, from 192 to 1832. In 1306 the Cham King Jaya Sinhavarman III offered the Vietnamese king, as a marriage gift, two northern provinces, roughly corresponding to the current Quảng Bình, Quảng Trị, and Thừa Thiên provinces (southern part of North Central). People from Thanh Hoá and Nghệ An (northern part of north central) were sent to these provinces to live. Later, through war with Champa in 1402, Vietnam took two provinces, Quảng Nam and Quảng Ngãi: the first big wave of immigrants, again, was from Thanh Hoá, Nghệ An, and Hà Tĩnh provinces (Nguyễn 2007). In 1446 Champa lost Vijaya (current Qui Nhon city) for Vietnam. This piece of land corresponds to current Quảng Nam, Quảng Ngãi, and Bình Định provinces (northern part of south central coast). In 1545, in its *Nam Tiến* (Southward Expansions) movement, Vietnam took over Phú Yên province: the second big wave of settlers came here from Ninh Bình, Thanh Hóa, Nghệ An, and Hà Tĩnh (Brunelle 2005). Vietnam was divided: the south was ruled by Nguyen Lord, the north by Trinh Lord. In 1648, 30,000 Quảng Bình soldiers were captured by the Nguyen army and brought to Quảng Nam to live. A few years later, in 1657, after winning a big battle, Nguyễn Lord brought home with him people from 7 districts of Nghệ An province to Quảng Nam to live.

The vast majority of Vietnamese immigrants living in the central and south central part of Vietnam, therefore, came from the northern part of the north central coast. Thanh Hoá, Nghệ An, and Hà Tĩnh provinces in north central Vietnam are known as the most conservative language area. Alves 2012 examines the grammatical vocabulary of north central Vietnam and compares it to other Vietic languages to show that the dialect spoken in north central Vietnam still keeps many old words that it does not share with either northern or southern dialects.

The north central area is also where the Mường people live, although their settlement is mainly in mountainous provinces in North Vietnam, especially in Hoà Bình, Thanh Hoá, and Ninh Bình provinces, south of Hà Nội. Baker & Baker's 1970 list shows that before alveolars or velars, the Proto Việt-Mường *ɛ corresponds to ɛ in both Việt and Mường. When the vowel precedes alveolars or velars or is in open syllables, there is no centralization. For example, PVM *lɛn > lɛn (Việt and Mường) 'secretly', *dɛ > dɛ (Viet) and tɛ (Mường) 'give birth'; PVM *ʃɛŋ > ʃɛːŋ (Việt and Mường) 'shovel' (Baker & Baker 1970:280). However, when *ɛ precedes palatals, the vowel is centralized in Việt, but not in Mường. It seems final palatals cause centralization in Vietnamese. Some examples for this case are given in (6n - p); additional examples are provided in (8).

(8)

PV-M	Mường	Việt	Việt orthography	Translation
*cɛŋ	cɛŋ	caŋ	*tranh*	to argue
*sɛŋ	sɛŋ	saŋ	*xanh*	blue, green
*lɛŋ	lɛŋ	laŋ	*lạnh*	cold

During the Việt-Mường Ancient period, from the 1st to 8th or 9th centuries, and the Common Việt-Mường Period, from the 10th to 14th centuries, palatals were contrastive in the coda (Trần 2005), and are still contrastive in the final position in modern Mường. Trần (2005:189) provides a list of comparative vocabulary of the modern Mường, northern and north central Vietnamese dialects to show that the dialects of the speakers in north central are very close to the Mường language.

The rhymes [ɛŋ] and [ɛc] retained in the speech of people in Quảng Nam, Bình Định, and Phú

Yên of south central Vietnam may well be a relic from the Viet-Mường Common period, spoken by people in Thanh Hoá, Nghệ An, and Hà Tĩnh, later going south. The final palatals after /i/ and /e/ in the Quảng Nam and Bình Định dialects could be a trace of immigrants from Thanh Hoá and Ninh Bình whose dialects still have final palatals.

There is an obvious geographic gap in the distribution of final palatals in modern Vietnamese. Palatals occur in northern and north central dialects. They completely disappear in Thừa Thiên-Huế, the province between north and north central Vietnam. Palatals then are found in the Quảng Nam, Bình Định, and perhaps the Quảng Ngãi dialects too. South of Bình Định, the final palatals again completely disappear. There are no reports on these finals anywhere. Also, the palatals/velars after [ɛ] are not seen anywhere except in the Bình Định and Phú Yên dialects and in some sub-dialects of north central, as in Hà Tĩnh and Quảng Bình (Cao 1998). This is an observation needing further investigation. If it is correct it would provide further evidence that the rhyme migrated with the north central speakers.

5. CONCLUSION. This paper examines the asymmetrical distribution of final consonants in various dialects of Vietnamese, from the standard dialect of northern Vietnam to sub-dialects in south central Vietnam. The distribution of these consonants presents a picture of sound change in progress in Vietnamese. It shows that the historical palatals are disappearing. The historical alveolar in the Hà Nội dialect is also disappearing in most dialects of central and southern Vietnam. The hypothetical rhymes [ɛŋ] and [ɛc] in the Hà Nội dialect are actually found in the Bình Định and Hòa Quang Bắc dialects, a fact that supports the hypothesis that palatals once occurred in Vietnamese after most vowels including /ɛ/, as they still do in the modern Mường language. The surviving palatals in Vietnamese later became alveolars after front vowels in most dialects of central and southern Vietnam.

In some dialects, the sound change in progress is clearly shown in the disappearance of palatals and alveolars (merging with velars) after most vowels, but at the same time these historical palatals and alveolars are still preserved after short front vowels.

The pattern of immigration of Vietnamese settlers during the 14th through 17th centuries also explains why in the new lands we find features of the old Vietnamese (Pham 2022). The pattern of immigration also explains why these features are found in dialects that are remote and isolated from their ultimate sources.

REFERENCES

ALVES, MARC. 2012. Notes on grammatical vocabulary in Central Vietnamese. *Journal of the Southeast Asian Linguistics Society* 5:1-11.

BAKER, A. MURIEL, & MILTON E. BAKER. 1970. Proto-Vietnamuong (Annamuong) final consonants and vowels. *Lingua* 24:268-85.

BRUNELLE, MARC. 2005. *Register in Eastern Cham: Phonological, phonetic and sociolinguistic approaches*. Cornell University Ph. D. dissertation.

CAO, XUÂN HẠO. 1998. *Tiếng Việt - Mấy vấn đề ngữ âm, ngữ pháp, ngữ nghĩa* (Some issues in phonetics, syntax and semantics in Vietnamese). Hà Nội: Giáo dục.

CÙ, ĐÌNH TÚ, HOÀNG VĂN THUNG & NGUYỄN NGUYÊN TRỨ. 1977. *Ngữ Âm Học Tiếng Việt Hiện Đại* (Phonology of modern Vietnamese). Hà Nội: Publisher of Education.

ĐOÀN, THIỆN THUẬT. 1977. *Ngữ Âm Tiếng Việt* (Vietnamese phonology). Hà Nội: Đại học và Trung học chuyên nghiệp.
EMENEAU, M. B. 1951. *Studies in Vietnamese (Annamese) grammar.* Berkeley: University of California Publications in Linguistics.
HAUDRICOURT, ANDRÉ. 1954. De l'origine des tons en viêtnamien. *Journal Asiatique* 242:69-82.
Haughton, Dominique, & Nguyễn Phong. 2004. Graphical and numerical descriptive analysis: Exploratory tools applied to Vietnamese data. Journal of statistics education Volume 12, Number 2. http://www.amstat.org/publications/jse/v12n2/haughton.html
HOÀNG, THỊ CHÂU. 1989. *Tiếng Việt trên các miền đất nước* (Vietnamese dialectology). Hà Nội: Nhà Xuất Bản Khoa Học Xã Hội.
Hữu, Quỳnh and Vương Lộc. 1980. *Khái Quát Về Lịch Sử Tiếng Việt Và Ngữ Âm Tiếng Việt Hiện Đại* (Introduction to the history and phonology of contemporary Vietnamese). Hà Nội: Nhà xuất bản Giáo dục.
LADEFOGED, PETER. 2003. *Phonetic data analysis: An introduction to fieldwork and instrumental techniques*. Malden – Oxford – Carlton: Willey-Blackwell.
LÊ, VĂN LÝ. 1948. *Sơ Thảo Ngữ Pháp Việt Nam* (Introduction to Vietnamese grammar). Paris: Hương Sơn.
NGUYỄN, ĐÌNH HOÀ. 1997. *Vietnamese*. Amsterdam/Philadelphia: John Benjamins Publishing Company.
NGUYỄN, ĐĂNG VŨ. 2007. *Quảng Ngãi – Một số vấn đề lịch sử văn hóa* (Quảng Ngãi – Some issues on cultural history). Hà Nội: Nhà xuất bản Khoa học xã hội.
OHALA, JOHN. 1992. What's cognitive, what's not, in sound change. In *Diachrony within synchrony: Language History and Cognition*, Gunter Kellermann and Michael D. Morissey (eds.), 309-355, Frankfurt am Main: Peter Lang Verlag.
PHẠM, ANDREA HOÀ. 2006. Vietnamese rhyme. *Southwest journal of linguistics*, 25:107–42.
---. 2022. *Nguồn gốc và sự hình thành giọng Quảng Nam - Quang Nam phonology and Sound change through Contact*. Danang city: Danang Publishing House.
THOMPSON, LAURENCE E. 1965. *A Vietnamese grammar*. Seattle: University of WASHINGTON PRESS.
---. 1967. The history of Vietnamese final palatals. *Language* 43:362-71.
TRẦN, TRÍ DÕI. 2005. *Giáo trình lịch sử tiếng Việt (Lectures on the history of the Vietnamese language*). Hà Nội: Nhà Xuất Bản Đại học Quốc gia Hà Nội.
VƯƠNG, HỮU LỄ, & HOÀNG DŨNG. 1994. *Ngữ Âm Tiếng Việt* (Vietnamese phonology). Hà Nội: Giáo dục.

This article was first published at www.lacussquare.org

LACUS Forum **39:1.37-49 (2025)**

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FLUENCY AND SEMANTICS OF LANGUAGE IN SCHIZOPHRENIA AND MANIA

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Abstract: A computational analysis located differences in the language of mania and schizophrenia that are likely to be clinically noticeable. Impairment in discourse (fluency and cohesion) distinguished the disorders more than the many semantic and syntactic measures used. This finding suggests that it is flow of speech and how the flow of speech is related to the cohesive markers that are important in distinguishing the disorders.

Keywords: computational linguistics, clinical linguistics, mania, systemics, schizophrenia

BOTH SCHIZOPHRENIA AND MANIA are characterised clinically by a number of linguistic features. Speakers with schizophrenia feature disorganized speech (frequent derailment or incoherence), whereas individuals with mania become more talkative than usual or experience an urge to keep talking, suffer from flight of ideas, feel that thoughts are racing, and manifest distractibility (attention too easily drawn to unimportant or irrelevant external stimuli). Thus, there is overlap between these clinical descriptions. Our goal is to identify by computational means the linguistic characteristics for both schizophrenia and mania which not only coincide with the clinical descriptions of the disorders but successfully distinguish them from each other. Given the nature of the disorders and their clinical descriptions, we explored measures of semantics (transitivity, taxis, logico-semantic relations, lexical variability and flexibility, and richness of description) and discourse (cohesion and fluency). It was hypothesized that current computational methods can identify various subtle differences in discourse that taken together identify characteristics of the disorders and classifying speakers.

1. METHOD. Informal 10-minute semi-structured clinical interviews were recorded openly with a variety of psychiatric patients (Bartolucci & Fine 1987). The topics concerned the patients' health, relations with relatives, their previous studies and employment. Generally, open ended questions were designed to stimulate spontaneous conversation reflecting language use in the patients' speech community. There were 6 conversations for schizophrenia from 6 different speakers and 4 conversations for mania from 3 speakers. Diagnosis was according to the Research Diagnostic Criteria (Spitzer et al. 1978), with the further inclusion criteria of ability to cooperate with the study and English as first language. The conversations were transcribed in standard orthography – with

pauses indicated by periods and interrogative intonation marked by a question mark. The transcripts were annotated with the UAM Corpus Tool (O'Donnell 2008). Subject characteristics are presented in **Table 1**.

No.	Subject	Sex	Age	TD	Int. Date	Diagnosis
1	*S_Al*	M	21	3	21 Oct 78	Schizophrenia: acute
2	*S_Ch*	F	72	3	20 Oct 78	Schizophrenia: chronic
3	*S_Du*	M	24	1	14 Dec 78	Schizophrenia: acute
4	*S_Ja*	F	49	2	15 Oct 79	Schizophrenia: acute
5	*S_Man*	M	22	1	27 Sep 78	Schizophrenia: acute
6	*S_McD*	M	18	0	16 Nov 78	Schizophrenia: acute
7	*M_Mu1*	M	20	2	14 Aug 79	Manic disorder
8	*M_Mu2*	M	20	2	31 Aug 79	Manic disorder
9	*M_Ra*	M	22	1	9 Nov 78	Manic disorder
10	*M_Re*	M	31	2	9 Jan 79	Manic disorder

Table 1. Patient characteristics. Note: S = Schizophrenia; M = Mania; TD = Cranco index of Thought Disorder; Int. = Interview.

2. LINGUISTIC MEASURES. A range of linguistic measures explored the semantics and discourse fluency of the speakers. In terms of semantics, the question was: do the two groups of speakers talk about the same things? To address this question, semantic measures were extracted from the transcripts. The UAM Corpus Tool (O'Donnell 2008) was used to annotate and analyze the transcripts. The transcripts were incorporated into the Tool, schemes for each layer were created by means of the graphics of UAM (**Figure 2**), and a hierarchy of tags appropriate for each layer was developed. Then cross-layer searching, semi-automatic tagging and other functionalities of the Tool were used for analysis. First, the process types (Halliday & Matthiessen 2004) were coded to investigate what happenings are expressed. This comprehensive system of process types includes Material, Behavioural, Mental, Verbal, Relational, and Existential processes. All processes realized by verbs were included in the analysis. The main verbs of the independent clauses and the verbs in rank-shifted clauses were both included. The hypothesis was that clinical characteristics of schizophrenia and mania could skew the use of process types. For example, in schizophrenia, persecutory delusions, suspiciousness, and attribution of negative intentions to other individuals could be presented in Material processes. In mania, the hallmark feature of grandiosity (a conviction of having special ideas, abilities and powers) could be expressed by relational clauses (*I have big ideas all the time*). These examples indicate how the distribution of process types could be sensitive to at least some of the clinical features of the disorders. As shown in **Figure 1**, the distribution of process types is almost identical in mania and schizophrenia.

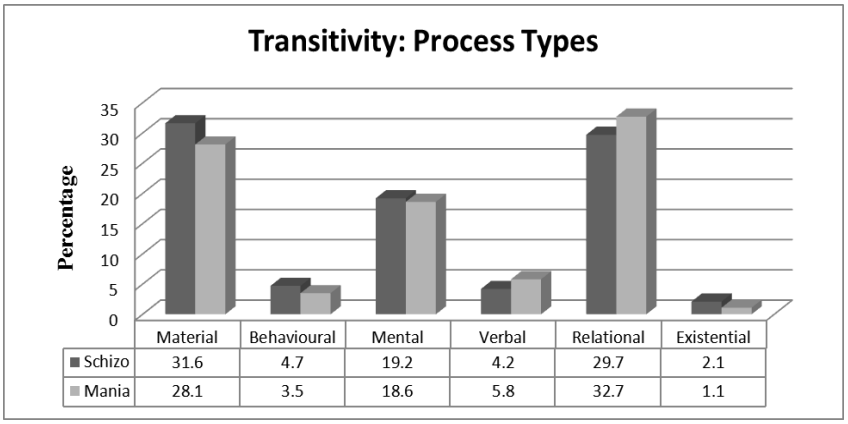


Figure 1. Each process type as a percentage of total processes (including unclear and incomplete processes not displayed in the chart).

As well as process types themselves, an analysis of taxis and logico-semantic relations explores how speakers combine meanings in more complex utterances. The disorganised speech in schizophrenia (frequent derailment or incoherence) is understood clinically as a failure to establish coherence across clauses (Ditman & Kuperberg 2010), with tangentiality and derailment as most common phenomena encoded in thought disordered speech (Andreasen 1979). For example, the speaker with schizophrenia below (example 1) starts to answer the question but then digresses (in clinical; terms, "loses goal").

(1) I: Have you seen her [the patient's sister] lately?
S: Y- yes // I had // we- well no // I haven't seen her for a long time // (.) but I saw somebody // that's supposed to be <name> // and Louise is not (.) not the right <name> at all // (.) <name> is uh altogether different // (.) the other girl is very nice // and uh she's the polite // and she's um (.) more classical than what <name> would ever be able to // (.) because <name> body is that of a of a (.) of a devil // she's a devil // (.) and um (.) <name> just said // that is the devil's name // that's why there aren't so many Nose (…) in the city // (.) but um (...) um (.) the man that uh was taking care of her // (.) he um (.) he's a // I think // it is or (.) and // uh (.) he's had an awful time

The analysis of the relation between two clauses is determined by two systems: the degree of independence (Taxis in Systemic-Functional Linguistics) and logico-semantic relations. Taxis has two options. Parataxis is the relation between connected clauses having equal status (M: *They're upstairs and I'm able to go and see my sons now*), while Hypotaxis is a relation in which one clause is dominant (S: *I feel that I have missed something*). Logico-semantic relations define the two basic relations of expansion (the secondary clause is elaborating, extending or enhancing the primary one (S: *I had grade eight education and I was sort of a hippy*) and projection (the secondary clause is projected through the primary one (M: *My grandfather he ah he was saying that he wanted to go back there*) (Halliday & Matthiessen 2004:376)). The full coding scheme following Halliday & Matthiessen (2004) is presented in **Figure 2**.

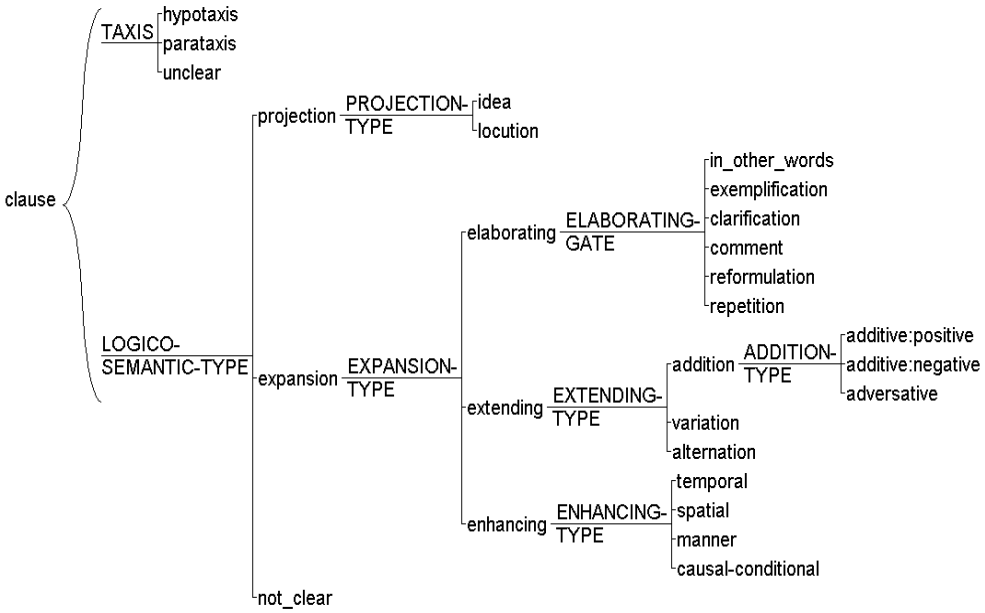


Figure 2. Taxis and logico-semantic relations (adapted from Halliday & Matthiessen 2004: 373).

Paratactic elaboration is very common for both groups. In schizophrenia, paratactic elaboration can encode symptoms such as circumstantiality. Circumstantiality is characterized by numerous digressions on the way to the goal when excessive details convey the message. In the following segment, the clause *and uh (.) I forget the name of this teacher* is a digression; it does not advance towards the communicative goal.

(2) S: So it was always a thing out of something like that (.) with something nice and something good well // (.) you should come in earlier // (.) but she used to try and send a note to the teacher // (.) and uh (.) I forget the name of this teacher // but uh (.) she uh (.) say um (.) out at the // she wanted her to keep me in after school // because people were coming in to see me //and they only wanted to come to kidnap me

The two groups of speakers used the resources of taxis and logico-semantic relations in startlingly similar frequencies. However, some differences do stand out. The speakers with schizophrenia more frequently than the speakers with mania (schizophrenia – 30%, mania – 17%) elaborate the primary clause, saying the same thing in other words (elaboration : exposition), as in: (S): "They only wanted to come to kidnap me // to take me away with them". Clarification as a type of paratactic elaboration occurs among the mania subjects more frequently than among the schizophrenia subjects (mania – 41%, schizophrenia – 26%). Each type of paratactic elaboration was measured as a percentage in the total number of paratactic elaboration processes (Saying-in-Other-Words, Exemplification, Clarification, Comment, Reformulation, and Repetition). In Clarification, the secondary clause clarifies, explains in some way, the thesis of the primary clause. Sometimes, the clarification is accompanied by a shift in polarity. In our data, shift in polarity is found mostly in the schizophrenia speakers:

(3) S: I need glasses // I can't see very well without them
M: My brother is going to Mohawk College // he just signed in for ah an art program.

Despite an expectation that speakers with mania and schizophrenia would differ in the use of meanings at the center of clauses (events expressed as process types), there was great similarity for almost all of the many categories and sub-categories of processes types. See figure 3.

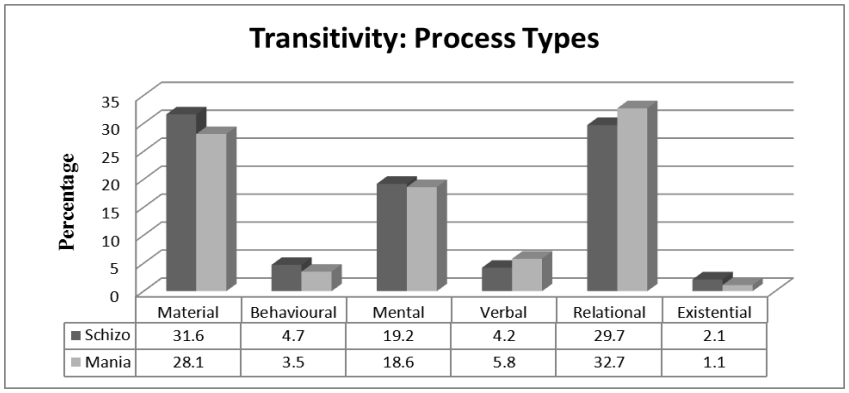


Figure 3. Percentage of each process type of the total number of process types (including unclear and incomplete processes that are not displayed).

3. LEXICAL VARIABILITY AND FLEXIBILITY. A further exploration of semantic differences dealt with lexical variability and flexibility. In schizophrenia, there are reports of idiosyncratic uses of real words and phrases (Levy et al. 2010), unusual, abstract, or bizarre word choices (Lecours & Vanier-Clement 1976, qtd. in Chaika 1990), and real words with private meanings and neologisms (Andreasen 1986). In addition, there are inconsistent findings that there may be a lower type-token ratio in (especially thought-disordered) schizophrenia, (Fairbanks 1944, qtd. in Hotchkiss & Harvey 1986; Mann 1944, qtd. in Resnick 1967; Manschreck 1981; Linscott 2005). Such differences, however, were not found by Feldstein & Jaffe (1962). In the present study, identical type-token ratios of 0.28 (the proportion of different words (types) to the total number of words (tokens)) were found for schizophrenia and mania.

4. USAGE OF HIGH AND LOW-FREQUENCY WORDS. Another computational method for determining lexical variability is comparing the complete set of lexical items used across groups. The Corpus of Contemporary American English (COCA) (Davies 2011) was used for frequencies of words in American English. The words in the COCA were divided into groups by frequency. The first 150 most frequently occurring words compose the first group, the next 350 words with the ranks 151-500 compose the second group, etc. Each word (type) in the transcripts of the subjects with schizophrenia and mania was assigned to a frequency group in the COCA. The words in the transcripts that do not occur in the COCA were assigned to group 8 and considered the most idiosyncratic. The percentage of words in each group was calculated as a relation of the number of

words (types) in the group to the total number of different words (types) in the transcripts.

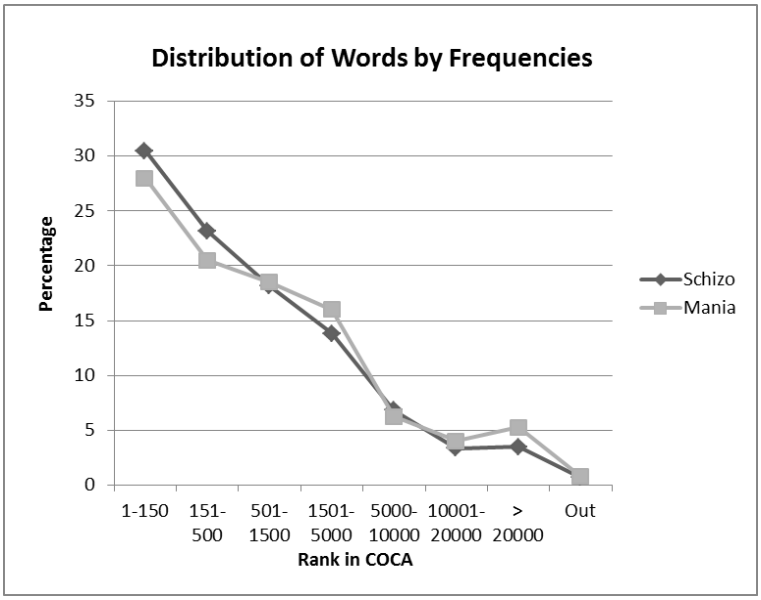


Figure 4. Distribution of words by frequencies in schizophrenia and mania: percentage of words in each rank-group. (COCA = Corpus of Contemporary American English).

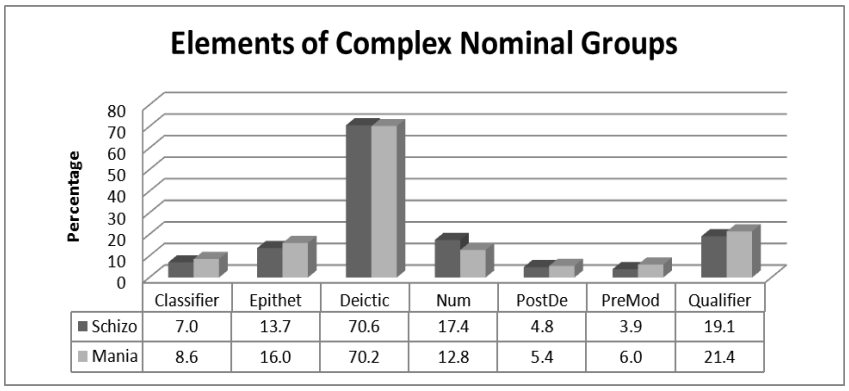
Both groups of subjects used common words, less common words and rare words in approximately the same proportion (**Figure 4**). For example, the words found in COCA in positions 1 to 150 amount to 31% of the total number of words (types) in schizophrenia and 28% in mania. In almost all other groups, the results differ by 1-2% in favour of the speakers with mania.

5. UNIQUE WORDS. An insider-group comparison tested the lexical similarity within the diagnostic groups. Unique words were calculated as a proportion of unique words (lexemes) in the transcript of the patient to the total number of words (lexemes) in the transcripts of all subjects in the group. The subjects diagnosed with mania used unique words (words not used by other speakers with mania) more frequently than subjects with schizophrenia (mania – 47%, schizophrenia – 35%). That is, the speakers with schizophrenia were somewhat more restricted in using unusual words.

An across-group comparison was also performed by determining uniqueness scores for the speakers as a proportion of words that were not produced by any other speaker. Mean scores were calculated for the groups in both tests. This across-groups comparison revealed less difference between the groups; however, the speakers with mania showed somewhat higher uniqueness scores (mania – 32%, schizophrenia – 27%). Again, the measures of lexical variability and flexibility show essentially no differences for mania and schizophrenia. They use almost the same words.

6. RICHNESS OF DESCRIPTION. As well as lexical measures of semantic variation, the amount of detail in nominal groups was examined. The question was whether the groups differed in the richness of description of people, places and things (Participants in SFL). Recall that the potential differences in the happenings of the world were explored through the analysis of Processes.

6.1. NOMINAL GROUPS. Nominal groups were analysed in terms of these functions: Deictic, Numerative, Classifier, Epithet, PostDeictic, Thing and Quantifier (Halliday & Matthiessen 2004). Nominal groups were classified as simple if they consisted of one element (typically Thing, Pronoun, or Deictic) or complex. Speakers with schizophrenia and mania used simple nominal groups approximately twice as frequently (schizophrenia – 72%, mania – 68%) as complex ones (schizophrenia – 28%, mania – 32%). As with other measures of semantic variability and complexity, the groups were very similar. This similarity is also present when comparing the rate of each possible element in the nominal group (**Figure 5**).



	Classifier	Epithet	Deictic	Num	PostDe	PreMod	Qualifier
Schizo	7.0	13.7	70.6	17.4	4.8	3.9	19.1
Mania	8.6	16.0	70.2	12.8	5.4	6.0	21.4

Figure 5. *Percentage of complex nominal groups containing each element. (Num = numerative; PostDe = postdeictic; PreMod = premodifier).*

6.2. LEXICAL SIMILARITY. As well as functions in the nominal group, an adjective-verb ratio has been used to examine richness of description (Rosenberg & Tucker 1979). Speakers with schizophrenia have a low adjective-verb quotient (AVQ) compared to unaffected speakers (Mann 1944, qtd. in Resnick 1967). We adapted the AVQ approach to estimate richness of description. The description function can be expressed not only by adjectives but also by nouns used as Classifiers and by clauses used as Qualifiers.

Richness of description was measured by steps. First, the total number of Classifiers and Epithets expressed by adjectives and nouns was divided by the number of processes (transitivity scores) to approximate an AVQ. Speakers with mania have a higher ratio than those with schizophrenia (mania 0.13, schizophrenia 0.1), using Classifiers and Epithets in relation to verbs 1.3 times more frequently than subjects with schizophrenia. When the Epithet/Classifier/PostDeictic/Qualifier-Verb Ratio was calculated, again there was a lower quotient for schizophrenia (schizophrenia 22, mania: 28). The different computational methods show consistent but rather small differences: speakers with schizophrenia have less rich descriptions than speakers with mania.

6.3. SUMMARY OF SEMANTIC MEASURES. Although a wide range of semantic measures was used, from the specific Processes in clauses to the logico-semantic relationships across clauses and a number of measures of lexical and descriptive richness, the groups of speakers are largely the same. For schizophrenia, descriptions are somewhat less rich, and there are some isolated differences in frequency of certain clause-combining functions. However, there is no overall difference in the distribution of these functions.

7. DISCOURSE. As well examining what speakers with mania or schizophrenia mean, we investigated

the flow of their conversations by looking at features of cohesion and fluency. These latter studies focused on features that built up or interfered with the flow of speech as perceived and processed by hearers. The sets of measures were cohesion that creates the continuity of meaning by tracking participants (reference) and creating relations among clauses (conjunction), and fluency measures that track interruptions in the flow of speech. We were also interested in how the cohesion and fluency measures interact.

7.1. COHESION MEASURES – REFERENCE. Reference cohesion is created through items that "instead of being interpreted semantically in their own right … make reference to something else for their interpretation" (Halliday & Hasan 1976:31). Subjects diagnosed with schizophrenia display difficulties with cohesive items including references (Rochester & Martin 1979). The difficulties in processing references are manifested both by unclear references ("they" in the following example) and by dysfluencies when producing references (the repetition of "the" in "the the hotel"):

(4) S: She set fire to **the the** hotel // that she wanted // (.) not quite a hotel // it's a restaurant // (.) it was out of the way // and it was ah (.) // she thought // **they**'d make good // like with the travelers going by and stopping for a meal (.)

Clinically, unclear reference is interpreted as the inability to "maintain multiple referents online for later resolution," to "use contextual information or real-world knowledge to link the correct anaphor with the correct antecedent" (Ditman & Kuperberg 2010:8) and "[to express] empty content with verbal description teaming with pronouns often without antecedents" (Marini et al. 2008:145). Unclear, including ambiguous, references are associated with severity of derailment, poverty of content of speech (Harvey & Brault 1986). Similarly, pressure of speech in mania is associated with incompetent references.

Harvey & Brault (1986) found that the pressure of speech in mania is associated with increased incompetent references, whereas in schizophrenia the number of unclear and ambiguous references is highly predicted by the severity of derailment and poverty of content of speech. Our observations support these findings. The impairments in pronominal referential cohesion largely correlate with the severity of thought disorder in schizophrenia. However, one subject (Sch-Al) was an exception. In our data, however, there was little unclear reference. The referential markers in this study included: third person pronouns, third personal determiners, demonstrative references, relative pronouns, and exophoric reference to both speech roles ("I", "you") and non-speech roles ("that (pointing) table") as well as unclear reference.

7.2. COHESION MEASURES – CONJUNCTION. Rochester & Martin (1979) found that speakers with thought disordered schizophrenia use more lexical cohesive ties and fewer conjunctions, compared to non-thought disordered patients and unaffected speakers. The frequency of conjunction links between clauses in schizophrenia and mania were compared. Since the amount of discourse varies among patients, conjunctive cohesion is expressed as the ratio of cohesive elements to number of processes. There was a somewhat higher rate of conjunction in the language of mania compared to schizophrenia (mania 37.4, schizophrenia 31.1). A comparison of the most frequent conjunctions (but, and, then, so, as, because, after, now) showed only small differences between mania and schizophrenia. The largest differences on individual conjunctions were that speakers with schizophrenia used "but" and "because" less frequently. There was no association between thought disorder and rate of conjunction for schizophrenia. There was, though, a negative association

between the severity of thought disorder and conjunction for mania. Overall, therefore, there was less clause-joining conjunction in schizophrenia. These speakers were signaling less often that clauses were relevant to each other.

7.3. FLUENCY MEASURES. The fluency measures included pauses, filled pauses, stumbles, repetitions of lexical items, the number of adjacent repetitions of lexical items, and the length of repeated multi lexical units. To assess the interaction of cohesion and fluency, the fluency variables were tracked specifically with respect to cohesive items and with respect to conjunction and reference separately. Schizophrenia was distinguished from mania by more filled pauses and more silent pauses, whereas the speech of mania had more stumbles (10 times the rate of schizophrenia), repetitions of lexical items (3 times the rate of schizophrenia), more repeated adjacent repetitions, and longer repeated multi lexical units (**Figure 6**).

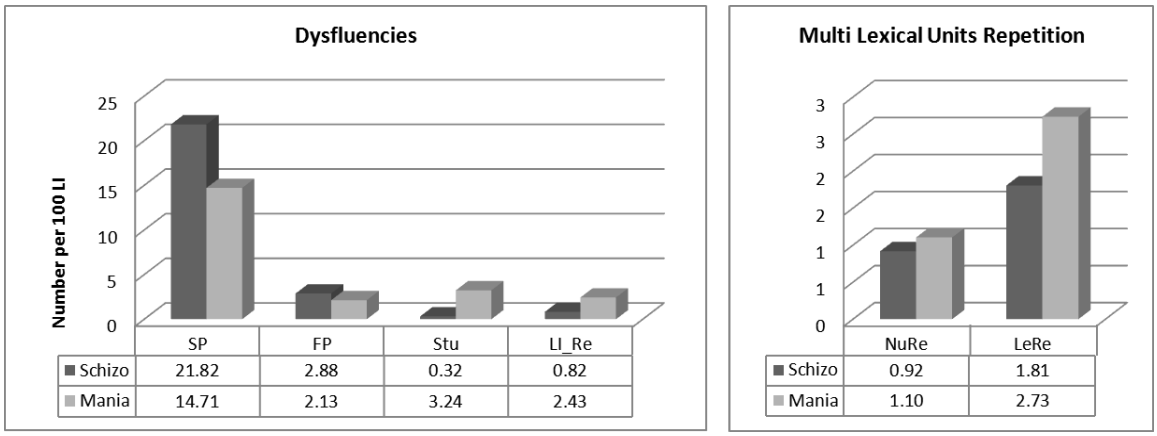


Figure 6. Number of dysfluencies per 100 LI in schizophrenia and mania. (SP = silent pauses; FP = filled pauses; Stu = stumbles; LI_Re = number of repetitions of lexical items not entering multi lexical units; NuRe = number of repetitions of multi lexical units; LeRe = length of repetitions of multi lexical units).

8. FLUENCY AND COHESION. To explore the interaction between fluency and cohesion, the dysfluencies (pausing before and after items and repetition) associated with cohesion items compared to non-cohesion items were calculated. The issue was whether mania and schizophrenia were distinguished by the combination of discourse measures involving cohesion and fluency. If cohesion is atypical, perhaps it is also associated with more dysfluency. Alternatively, atypicalities in cohesion may combine with dysfluency to create particularly atypical and noticeable interaction. **Figure 7** presents the percentage of dysfluencies near cohesive compared to near non-cohesive items for mania and schizophrenia separately. For both groups, there is more dysfluency near cohesive items compared to near non-cohesive items. However, this distinction is more pronounced in schizophrenia. In particular, these speakers have more filled pauses before and after cohesive items and more silent pauses both before and after cohesive items. That is, the speakers with schizophrenia show more dysfluency in the presence of cohesive items, as if processing the cohesive items induced more dysfluency. From the hearer's perspective, the speech sounds dysfluent just when the listener is attempting to follow the connections from one part of the text to another.

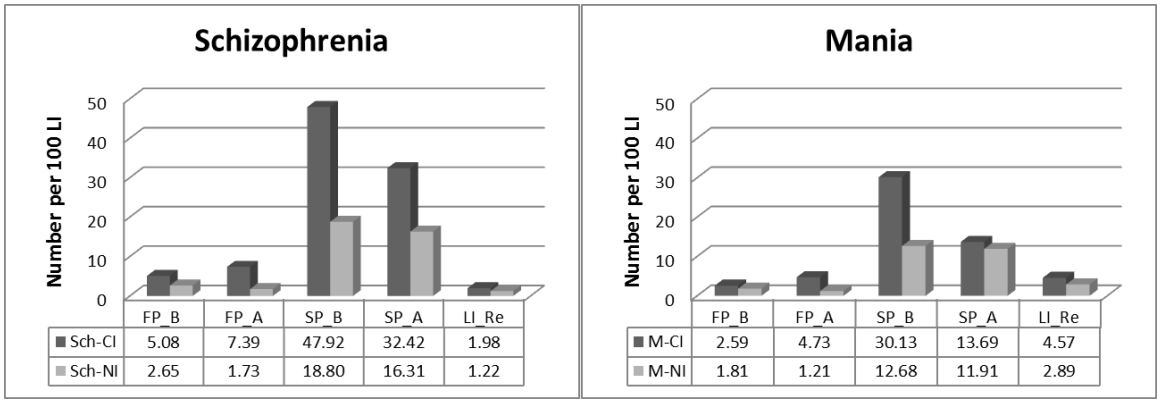


Figure 7. Number of dysfluenceis per 100 cohesive (CI) or non-cohesive (NI) lexical items (LI) in schizophrenia and mania. (FP_B = filled pauses before LI; FP_A = filled pauses after LI; SP_B = silent pauses before LI; SP_A = silent pauses after LI; LI_Re = number of repetitions of LI).

To distinguish between conjunctions, which connect clauses and the propositions they express, and reference (the continuity of participants), dysfluency and these two types of cohesion were calculated separately (**Figure 8**). The speakers with schizophrenia are clearly distinguished by frequent dysfluencies near conjunctive devices (filled pauses after conjunctive devices, and silent pauses both before and after conjunctive devices). The speakers with mania show smaller differences between conjunction and reference but with more dysfluencies near conjunction (after filled pauses and after silent pauses).

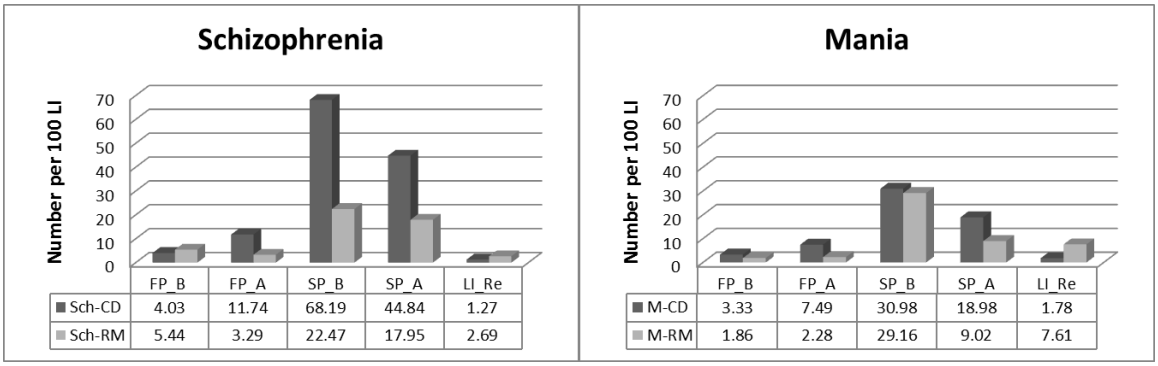


Figure 8. Number of dysfluencies per 100 conjunctive devices (CD) or referential markers (RM). (LI = lexical item; FP_B = filled pauses before LI; FP_A = filled pauses after LI; SP_B = silent pauses before LI; SP_A = silent pauses after LI; LI_Re = number of repetitions of LI).

9. DO SPEAKERS WITH SCHIZOPHRENIA AND MANIA SOUND DIFFERENT? A discriminant analysis was performed to reduce total number of dependent variables to the "best" set of variables that describe group differences or predict group membership. The stepwise procedure orders variables by their contribution to separation between groups. Four tests were performed with the following results:

Test 1: silent pauses after exophoric speech role references; verbal process with exclusion of some variables
Test 2: hypotaxis/projection/locution; stumbles on non-cohesive items
Test 3: filled pauses after cohesive items; filled pauses
Test 4: stumbles; stumbles on non-cohesive lexical items.

All speakers were correctly categorized into the diagnostic groups, almost exclusively by the discourse variables of cohesion and fluency. When group differences on individual variables are tested by the non-parametric Mann-Whitney-Wilcoxon scale, the significantly different variables are the discourse measures: silent pauses after exophoric speech roles references ($p<0.01$, more in schizophrenia), and repetitions of referential markers ($p<0.04$), stumbles on non-cohesive lexical items ($p<0.04$) and stumbles ($p<0.01$), all more in mania). The non-fluency variable Existential Processes also differed ($p<0.04$).

10. CONCLUSIONS:

10.1. WHERE ARE THE DIFFERENCES?

The discourse-impairing linguistic features show differences between the groups. In particular, cohesion in combination with fluency makes the groups sound different. Mania is characterised by repetition and stumbles, whereas schizophrenia is characterised by silent pauses before first person speaker roles ("I"), pausing after endophoric references ("he", "she", "it"). In terms of meaning, schizophrenia is noted for sounding rather semantically empty with more frequent lexical items, and less uncommon lexis.

10.2. WHERE ARE THERE NO DIFFERENCES?

Although there are some clear differences in the language of mania and schizophrenia, negative findings are also important. The semantic variables, including a wide range of process types and a detailed analysis of logico-semantic relations, show few differences. Simple measures of syntactic complexity (such as words per clause, hypotactically related clauses) also show no clear group differences.

The computational analysis located wide differences in the language of mania and schizophrenia that are likely to be clinically noticeable. Impairment in discourse is more evident in distinguishing the disorders than the many semantic and syntactic measures. This finding suggests that it is flow of speech and how the flow of speech is related to the cohesive markers that are important in distinguishing the disorders. Unexpectedly, semantic and syntactic information are less evident, even though schizophrenia is largely characterised by thought disorder and disorganised speech and mania is characterised as a mood disorder. The clinician intuitively integrates different linguistic features to form an impression for diagnosis. The computational analysis has shown explicitly how it is the combination of features that forms an impression of the language in each psychiatric disorder.

REFERENCES

ANDREASEN, N. C. 1979. Thought, language, and communication disorders: Diagnostic significance. *Archives of general psychiatry* 36:1325–30.

---. 1986. The scale for assessment of thought, language and communication (TLC). *Schizophrenia bulletin* 12:473–82.

BARTOLUCCI, G., & J. FINE. 1987. The frequency of cohesion weakness in psychiatric syndromes. *Applied psycholinguistics* 8:67–74.

CHAIKA, E. O. 1990. *Understanding psychotic speech: Beyond Freud and Chomsky.* Springfield, IL: Charles C Thomas.

DAVIES, M. 2011. *Word frequency data from the corpus of contemporary American English (COCA).* Downloaded from http://www.wordfrequency.info (January 15, 2012).

DITMAN, T., & G. R. KUPERBERG. 2010. Building coherence: A framework for exploring the breakdown of links across clause boundaries in schizophrenia. *Journal of neurolinguistics*, Language in schizophrenia special issue, 23:254–69.

FAIRBANKS, H. 1944. Studies in language behavior: II. The quantitative differentiation of samples of spoken language. *Psychological monographs* 56:19-38.

FELDSTEIN, S., & J. JAFFE. 1962. Vocabulary diversity of schizophrenics and normals. *Journal of speech and hearing research* 5:76–78.

HALLIDAY, MICHAEL A. K., & RUQAIYA HASAN. 1976. *Cohesion in English.* London, Longman.

HALLIDAY, MICHAEL A. K., & CHRISTIAN M. I. M. MATTHIESSEN. 2004. *An introduction to functional grammar*. Third edition. London: Edward Arnold.

HARVEY, E. D., & BRAULT, J. 1986. Speech performance in mania and schizophrenia: The association of positive and negative thought disorder and reference failures. *Journal of communication disorders* 19:161-73.

HOTCHKISS, A. P., & P. D. HARVEY. 1986. Linguistic analyses of speech disorder in psychosis. *Clinical psychology review* 6:155–75.

LECOURS, A. R., & M. VANIER-CLÉMENT. 1976. Schizophasia and Jargon-aphasia. A comparative description with comments on Chaika's and Fromkin's respective looks at "schizophrenic" language. *Brain and language* 3:516–65.

LEVY, D. L., M. J. COLEMAN, H. JI. F. SUNG, S. MATTHYSSE, N. R. MENDELL, & D. TITONE. 2010. The Genetic basis of thought disorder and language and communication disturbances in schizophrenia. *Journal of neurolinguistics* 23:176–92.

LINSCOTT, R. J. 2005. Thought disorder, pragmatic language impairment, and generalized cognitive decline in schizophrenia. *Schizophrenia research* 75:225–32.

MANN, M. B. 1944. The quantitative differentiation of samples of written language. *Psychological monographs* 56:41-74.

MANSCHRECK, T. C., M. A. MAHER, & D. N. ADER. 1981. Formal thought disorder, the type-token ratio, and disturbed voluntary motor movement in schizophrenia. *British Journal of psychiatry* 139:7–15.

MARINI, A., I. SPOLETINI, I. A. RUBINO, M. CIUFFA, P. BRIA, G. MARTINOTTI, G. BANFI, R. BOCCASCINO, P. STROM, A. SIRACUSANO, C. CALTAGIRONE, & G. SPALLETTA. 2008. The language of schizophrenia: An analysis of micro and macrolinguistic abilities and their neuropsychological correlates. *Schizophrenia research* 105:144–55.

O'DONNELL, M. 2008. The UAM corpus tool: Software for corpus annotation and exploration. *Proceedings of the XXVI Congreso de AESLA*. Almeria, Spain.

RESNICK, R. W. 1967. *Personality patterns and psycholinguistic differences in response to music*. Unpublished doctoral thesis, University of Florida.

ROCHESTER, S., & J. R. MARTIN. 1979. *Crazy talk: A study of the discourse of schizophrenic speakers.* New York: Plenum.

ROSENBERG, S. D., & G. J. TUCKER. 1979. Verbal behavior and schizophrenia: The semantic dimension. *Archives of general psychiatry* 38:1331–37.

SPITZER, R.L., J. ENDICOTT, & E. ROBINS. 1978. Research diagnostic criteria. *Archives of General Psychiatry* 35: 773–82.

This article was first published at www.lacussquare.org

LACUS Forum **39:2.50-57 (2025)**

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TRANSLATION PROCESS AND GRAMMATICAL GENDER: AN EXPERIMENTAL APPROACH

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Abstract. The process of interlingual translation entails the simultaneous activation of two, sometimes incompatible, systems of conceptualizations – strategies to account for non-linguistic phenomena with language means (cf. Drzazga 2017). The translation process becomes particularly complex if the target language (TL) lacks some of the linguistic means that the source language (SL) uses to create the meaning for a given concept. Our paper focuses on the category of grammatical gender as a means to reflect differences in conceptualization between languages. Using translation from German into English, we analyze the question of how differences in conceptualization (grammatical categorization) in two linguistic systems affect the fluency of translation. In particular, we try to discover whether translators work above the word level, that is at the conceptualization level. If one conceptualization system prevails, which one is chosen – the native language of the translator or the foreign language? In order to answer these questions, we use Translog computer software and retrospective Think Aloud Protocols (TAPs) in investigating the translation process.

Keywords: grammatical gender, translation, translation problems, translation process, Think Aloud Protocols.
Languages: English, German.

IN ORDER FOR TRANSLATION TO TAKE PLACE, two linguistic and conceptual systems have to be simultaneously active. The role of the translator is to find in the target language an equivalent of the source language concept (cf. Tabakowska 1993, 2000). It may seem as straightforward as looking up a word in a dictionary. However, translation cannot be simplified to a straightforward input – output procedure, since the meaning of a word consists of many elements. Moreover, languages differ in the way they express this meaning. Our research was motivated by the observation that even some common cultural concepts may turn out to be problematic due to the differences between languages (cf., Stroińska 2007; Drzazga, Stroińska, & Sullivan 2012).

Our main research question was how do differences in linguistic categorization affect the fluency of the process of translation. Moreover, we wanted to see if novice translators are able to work above the word level, that is at the level of conceptualization. We also wanted to observe

which conceptualization system was chosen – German (the source language, but the second language of our participants) or English (the target language and the native language of our participants).

To address these questions we chose to investigate the category of grammatical gender in English and German in the process of translation. Specifically, we looked at the problems posed by the fact that German assigns grammatical gender to inanimate objects (cf. Konishi 1993) and English speakers often stumble when they encounter pronouns such as "she" or "he" being used to refer to things (cf. Rogers 1987).

We hypothesized that, due to their limited knowledge of German as well as their lack of translation experience, our participants would find the differences in grammatical gender systems in translation problematic. This, in turn, we believed, would find a reflection in the translation decision making process. We also anticipated that the participants would be aware of these differences and that therefore, they would be likely to mention them in Think Aloud Protocols. At the same time, we also expected that the product of translation would not include mistakes related to grammatical gender, as these would be easily avoided, mainly because of the familiarity of the participants with the content of the source text.

1. METHODOLOGY. Since it was the process, not the product of translation that was our main focus, we could not rely on the traditional method used in translation research: the comparison of the target text (the product of translation) to the source text. For this reason, we decided to use Translog software and retrospective Think Aloud Protocols (henceforth TAPs). The study was modeled on experimental research conducted by Hansen (2006).

Translog is software created "to be an automatic, subject-independent tool for collecting hard, supplementary process data to the softer data collected by means of introspection, retrospection and think-aloud" (Jakobsen 2006: 96). It is a key logger that records which keys were pressed on the computer keyboard. In addition, it also records the mouse clicks and the exact time when these actions took place. In this way Translog allows the researcher to have access to various stages in the production of the target text. It also helps to investigate the rhythm and the speed of target text production, by using the function that replays the typing process at an adjusted speed. Another advantage of using Translog is that the participants engage in the familiar activity of text editing, thus minimizing the anxiety the participants experience due to experimental manipulation.

The use of TAPs in translation research is based on the assumption that short-term memory is characterized by easy access, but its storage capacity is limited (Ericsson & Simons 1993). In the production of TAPs this short-term memory is accessed and it is assumed that the verbalization of the decisions being made does not influence the cognitive processes. However, the collection and the analysis of TAPs have raised many objections. First of all, there is no established research paradigm for the use of TAPs. Furthermore, during the production of TAPs the participants tend to engage in interaction with the researcher. Finally, the production of TAPs seems to interfere with the experimental task of translation (cf. Bernadini 2002).

We decided to triangulate our data by collecting retrospective TAPs while Translog was replaying the translation production process. In this way, we minimized the possibility of interference from TAP production on the translation process itself. In total, we collected three sets of data: 1) a translation product – a finished target text; 2) a translation process, as recorded by Translog; and 3) retrospective TAPs. In the next part of the paper, we describe the design of the experiment. Results and conclusions follow in subsequent sections.

1.1. PARTICIPANTS. Three undergraduate students, two male and one female, participated in the experiment. They were students in various Faculty of Humanities departments at McMaster University. English was their native language and all of them listed German as their second language, with French being the third one for all of them. They had all recently taken an upper level undergraduate German translation course. Their German proficiency was comparable, since they would all have completed at least two years of German language instruction courses. The instructor of the translation course had included grammatical gender problems in the content of the translation course and the participants had been explicitly taught to pay attention to this aspect of language while translating.

1.2. STIMULI. The participants were asked to translate one text—an adapted (shortened) fragment of one of the fairy tales by the Brothers Grimm, Snow White. We had decided to use a source text familiar to the participants in order to give them the opportunity of using their knowledge of the story to solve some of the translation problems. We also hypothesized that they would make fewer mistakes and would use their native language grammatical gender system more frequently, because the fairy tale functions in their native culture as well.

The text was 506 words long and was presented as a whole. In this stimulus text, we identified 15 phrases in which the translation from German into English required a change of grammatical gender. Examples are found below.

(1) so antwortete *er* [der Spiegel] 'so answered *he* [the mirror]'
(2) *Es* war eine schöne Frau. '*it* (Snow White) was a beautiful woman'
(3) Und weil *es* [Schneewittchen -Snow White] gar so schön war… 'and because *it* was so lovely'

In example (1), the mirror is referred to as *er* 'he' in the source text; however, since *mirror* is inanimate, we expected the pronoun to be changed to *it* in the English translation. Example (2) illustrates the problematic construction in which *es* 'it' is the grammatical subject but has no referent. It is the so called *Platzhalter*, 'place holder', as the subject position must be occupied in German. In English, there is a parallel construction, *it was,* but because the predicate noun refers to a person, the pronoun *it* should take a gendered form corresponding to the natural gender of the referent. Thus, we expected to see the translation "she was a beautiful woman" instead of *"it was a beautiful woman." Example (3) includes a neuter pronoun referring to the girl –Snow White. In German, both the noun, *das Mädchen* 'the girl', and the actual name of the character, *Schneewittchen*, are neuter and thus must be referred to as *es* 'it', but in an English translation this *it* should be rendered as *she*.

1.2.1. THE CASE OF BOAR.[1] The focus of our experiment was the types of phrases in which the fact that German assigns grammatical gender to inanimate objects or animals had to be ignored (example 1). However, there is a fragment in our text which does not require changing the pronoun: it is the sentence *Und als gerade ein junger Frischling dahergesprugen kam, stach er ihn ab* 'And

[1] We would like to thank the audience attending our presentation at LACUS39, especially Dr. Anna Moro, for pointing this out.

since at precisely that moment a young boar came out, he stabbed it/him'. *Boar* in English is one of the few common nouns that are marked for gender and it is masculine. Nevertheless, both the participants and the native speakers that we questioned afterwards admitted that in this context, they would still use *it* instead of the masculine pronoun, since *him* would mean that the animal was being personified. However, both *it* and *him* should be considered correct.

1.3. THE PROCEDURE. In the first part of the experiment, participants translated the German text on a computer that was using Translog. Translog resembles basic word processing software, but the screen is divided into two parts: one for the presentation of the source text, the other for typing. Moreover, unlike popular word processors, it does not have a spellchecker. The Internet connection was disabled so the participants would not be able to use any on-line translation tools, because accessing on-line translation sites would have interfered with the key logging count for the translation process itself. However, they were allowed to use a hardcopy of a German-English dictionary which was provided to minimize the anxiety they might experience. Following the experiment set up, the participants were left alone in the room.

After each participant finished the translation, the principal investigator offered them a short break and then initiated the second part of the experiment—the collection of retrospective TAPs. The translation process recorded by the Translog key-logging software was played back to the participant at a speed of 200% (i.e. at a pace slow enough to give them time to comment on the breaks or corrections, but fast enough to allow us to get through it in a reasonable amount of time), and the participant was asked to comment on their translation process and translation decisions. They were asked to concentrate on the corrections and pauses.

2. DATA ANALYSIS. As mentioned above, we collected three sets of data: the product, the process and the TAPs. These data will first be analyzed separately and then general conclusions will be drawn.

2.1. THE PRODUCT. The first set of data that we hoped would give us answers to our research questions was the target text produced by our participants. In analyzing the translated texts we noticed significant differences in the quality of the output.

Participant 1 (henceforth P1) produced a text that had 525 words and read like a second original. Except for occasional spelling mistakes (typos), it was written in good quality English. As they admitted in the TAP, the participant struggled to make the text sound like a fairy tale, thus they tried to preserve the register characteristic for this genre. For example, the translation of *so antwortete er* was 'he answered thus.'

Participant 2 (henceforth P2), on the other hand, produced a text that is clearly recognizable as a secondary text due to the mistakes present. First of all, there are lexical mistakes, e.g. '[a window] that had a black ebony frame, and stitches,' as a translation of *das einen Rahmen von schwarzem Ebenholz hatte* '[a window] that had a black ebony frame'. Secondly, the source language is clearly present, because of the capitalization of common nouns typical of German (e.g. 'You must kill her and bring me her Lungs and Liver as a symbol.'– the translation of *Du sollst es töten und mir Lunge und Leber zum Wahrzeichen mitbringen*). All these mistakes make it seem that P2 could not successfully operate in a bilingual mode. To further strengthen this inference, there is one instance of German used in the target text ('When she, sprach sie', as the translation of *Wenn sie vor ihn trat und sich darin beschaute, sprach sie*). Finally, the translation is shorter than that of Participant 1: the target text was just 491 words, since there were some omissions.

Participant 3 (henceforth P3) produced the shortest text (463 words), and the text included many instances of word-for-word translation, e.g., 'she had no more silence' – the translation of *keine Ruhe mehr hatte* 'she no longer had/was at peace', or sentences that had odd syntactic structure (e.g., missing subject).

We shall now consider the phrases identified as problematic from the point of view of grammatical gender differences. When the translations of these phrases by all three participants were compared, P1 translated all problematic phrases correctly, because they[2] used target language grammatical gender categorization. As mentioned above, the text read like a second original. Participants 2 and 3 both made 3 mistakes each, e.g., *'It was a beautiful woman'.

2.1. THE PROCESS. The analysis of the key logs provided by Translog reveals the decision-making process of the participants as reflected by corrections. Each of the gender problematic phases was analyzed, and for these problematic phrases P1 did not have any hesitations in the decision-making process, P2 hesitated on grammatical gender-related problems three times, while P3 made two corrections. The corrections are illustrated in (4), which reproduces a fragment of a log file for P2. The symbols are to be interpreted as follows: ✶indicates a pause of one second, the number in square brackets is the length of a longer pause, • is a log of the space bar, while for the backspace key, Translog uses the sign ⌫.

(4) [✶12.181]•There•was✶✶✶✶✶⌫⌫⌫⌫⌫⌫⌫⌫⌫✶She•was✶•as•white•as•snow

For sentence (3), P2 struggled with the phrase *Es war so weiß wie Schnee*. They first typed 'There was', then corrected it to 'She was.' *Es war* could be equivalent to the English 'there was' (e.g., in *Es war einmal eine Frau* – 'there was once a woman'), but this would not be the correct reading in the present context.

2.1.1 THE PAUSES. In order to understand the translation strategy that was applied by the three participants, we analyzed the pauses, deciding that only pauses longer than ten seconds would be treated as meaningful in our analysis.

In the first stage of our analysis, we counted the total number of pauses, with the result that there were no significant differences between participants. P1 stopped 53 times, P2 55 times and P3 made 40 pauses. The time each participant took to finish the translation may be important and should be kept in mind: P1 and P2 had a similar time, 61 and 62 minutes, while P3 took significantly less time, only 51 minutes.

Next, we divided the pauses into two groups: before the sentence and within the sentence, assuming that if translators work with concepts, not words, they should read and fully understand an entire sentence before attempting the translation. If they work in a word-for-word manner, they would stop within the sentence more frequently and these stops would be correlated with the occurrence of problematic lexical items. The results are presented in **Table 1**.

[2] The use of *they* for a participant is intended to preserve the anonymity of the participants.

Pauses in the translation process	P1	P2	P3
Before the sentence	**20**	**13**	**11**
Within the sentence	**33**	**42**	**19**

Table 1: *The total number of pauses in the translation process*

To gain more understanding, we also counted the average duration of the pauses made by the participants. The results are presented in **Table 2.**

Average duration of pauses	P1	P2	P3
Before the sentence (**average** time in seconds)	**33**	**39**	**27,7**
Within the sentence (**average** time in seconds)	**31,88**	**51,78**	**38**

Table 2: *The average duration of pauses in the translation process.*

From this analysis it seems clear that there were differences in translation strategies applied by our participants. P1 is the only one who stopped before the sentence for a longer time than within the sentence, although the difference is not significant. Both P2 and P3 paused within the sentence for longer and more frequently than before the sentence and these pauses are positively correlated with the occurrence of problematic lexical items. Very often, as confirmed in TAPs, that was the time it took to look up a word. No pauses related to the occurrence of phrases with problematic grammatical gender items were identified.

2.2. RETROSPECTIVE THINK ALOUD PROTOCOLS. In the analysis of the retrospective TAPs produced by our participants, each participant had one comment on the problem posed by the differences in grammatical gender systems between German and English. For example, P3 commented on their struggle with the term *Mädchen* ('girl'), which is neuter in gender. They said:

> "I used 'it' because the German translation is *Mädchen*, *das Mädchen* – so it is neutral, so 'it'. But in English it is a girl so I kept the 'it' for a little bit and then I … once it did not make sense any more I changed everything I could to 'she', because obviously she was a girl.

P1 commented on their decision to use *it* in reference to the mirror, while P2 gave comments on the sentence that included many pronouns and admitted using their familiarity with the fairy tale to decide on an appropriate translation.

3. DISCUSSION. From our observations it seems that even in the case of novice translators, if they work with sentences and ideas–i.e., above the word level–grammatical gender differences do not pose significant problems. However, if they translate the text word-for-word, which was the case for two out of our three participants, they are likely to use the Source Text grammatical gender system, thus making many mistakes in their translation. As a result, their Target Texts did not read well.

With reference to our hypothesis, the result was that the translators did not consciously consider grammatical gender to be a problematic issue in the process of translation, since in their TAPs there was just one mention per participant of such difficulty. However, as expected, we could observe the difficulties in the process of translation as recorded by Translog, where we found many instances of hesitations in the log files. Finally, we were surprised to see the mistakes in the target texts. We suspect that these were present, because the participants were told to translate the text to the best of their abilities and were assured that the quality of the translation would not be crucial to the experiment. This assurance was given in order to minimize the anxiety level. We assume that for that reason only one participant acknowledged proof reading the text.

4. STRENGTHS AND LIMITATIONS. We believe that our study exemplifies how the mere comparison of the product and the original would not have answered our research questions in full. Thus the triangulation of data that we achieved by collecting three sets of information (product, process, and TAPs) seems to be the most important strength of our research. We believe that we also added to the reliability of Think Aloud Protocols by collecting retrospective, not concurrent, protocols.

However, as a research tool Translog has problems and limitations, the most significant being that "log file data are objective third-person observations, but the evaluations of the movements after pauses are not" (Hansen 2003: 36; cf. also Bernardini 2002). Thus we acknowledge that the analysis of data undertaken in this article is subjective. However, our study, being exploratory in nature, seems to have at least partially answered our questions.

5. FUTURE DIRECTIONS. Since this study is, as mentioned above, exploratory in nature, there is future research that we intend to undertake to gain further understanding of and insight into the issue of grammatical gender in translation. First of all, we would like to conduct a similar investigation but include participants with other linguistic backgrounds to see how three different grammatical gender systems would interact. For example, using native speakers of Slavic languages would provide an interesting comparison, as Slavic languages have more complex grammatical gender systems than English and they assign grammatical gender to inanimate nouns. Moreover, we would like to use an unfamiliar text as stimulus, in order to limit the possibility of reliance on the shared cultural context to solve translation problems. Finally, we hope to use Translog combined with eye-tracking to gain other information on how the source text is read and processed by the translators.

6. CONCLUSIONS. Our preliminary results suggest that grammatical gender differences pose problems in the process of translation, but they do not influence the fluency of translation. In our data, there were no pauses correlated with items that were problematic because of grammatical gender differences. However, the difficulties were visible in the quality of the product, thus we believe that an awareness of the differences in grammatical gender systems in various languages should be included in translation training. Since this linguistic aspect aptly illustrates how conceptualization systems differ in languages, it also demonstrates why word-for-word translation does not produce good quality results. Thus, grammatical gender may be used to raise students' awareness of why they should use "professional" translation strategies–i.e., avoid working on a word level and search for equivalents on the level of conceptualizations. In conclusion, it may be said that the difficulties related to grammatical gender in translation need much more attention than they are currently receiving.

REFERENCES

BERNARDINI, SILVIA. 2002. Think-aloud protocols in translation research: Achievements, limits, future prospects. *Target* 13: 241–63.

DRZAZGA, GRAŻYNA. 2017. What can cognitive translation tell us about the relationship between language and thought? *LACUS forum* 37: 203-212.

DRZAZGA, GRAŻYNA, MAGDA STROIŃSKA, & WILLIAM J. SULLIVAN (2012). Pratchett's *Death* in translation: Masculine *Śmierć*? In *(Non) omnis moriar: Cultural and literary discourses of death and immortality*, ed. by Irmina Wawrzyczek & Aleksandra Kędzierska, 83–92. Lublin: UMCS Press.

ERICSSON, KARL ANDERS, & HERBERT ALEXANDER SIMONS. 1993. *Protocol Analysis: Verbal Reports as Data*. Boston: MIT Press.

JAKOBSEN, ARNT LYKKE. 2006. Research methods in translation - Translog. In *Computer keystroke logging and writing: Methods and applications*, ed. by Kirk P. H. Sullivan & Eva Lindgren, 95-106. Amsterdam: Emerald Group Publishing.

KONISHI, TOSHI. 1993. The semantics of grammatical gender: A cross-cultural study. *Journal of psycholinguistic research* 22 (September): 519–34.

HANSEN, GYDE . 2003. Theoretical and methodological reflections on research into translation processes in Santos, In *Triangulating Translation: Perspectives in Process Oriented Research*, ed. by Fabio Alves, 26-42. John Benjamins Publishing Company.

---. 2006. Retrospection methods in translator training and translation research. *The journal of specialized translation* 5 (5): 2–41.

ROGERS, MARGARET. 1987. Learners' difficulties with grammatical gender in German as a foreign language. *Applied linguistics* 8 (1): 48–74.

STROIŃSKA, MAGDA. 2007. The adventure of teaching translation as intercultural communication. In *Intercultural literacies and German in the classroom*. *Festschrift für Manfred Prokop zum 65sten Geburtstag,* ed. by Caroline L. Rieger, John L. Plews, & Christopher Lorey. *Giessener Beiträge für Fremdsprachendidaktik,* 51–70. Tubingen: Gunter Narr Verlag.

TABAKOWSKA, ELŻBIETA. 1993. *Cognitive linguistics and poetics of translation.* Tubingen: Gunter Narr Verlag.

---. 2000. Is (cognitive) linguistics of any use for (literary) translation? In *Tapping and mapping the processes of translation and interpreting,* ed. by Sonja Tirkkonen-Condit & Riitta Jääskeläinen, 83–95. Amsterdam: John Benjamins.

This article was first published at www.lacussquare.org

LACUS Forum **39:2.58-68 (2025)**

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COMPOSITIONALITY OF '*HAVE UNTIL* X *TO* V': WHY IT IS NOT A PHRASEOLOGICAL UNIT

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Abstract. This paper argues that the *until* phrase in the construction '*have until* X *to* V' behaves as an NP and therefore should be categorised as such based on the following diagnostic set of evidence: the *until* phrase is being used as the surface object and it behaves as an NP. The phraseological approach leaves open the question of how the *until* (*till*) phrase ends up appearing in the object position, though it should be clear that PPs normally do not occupy object position. We argue in this paper that the *until* phrase in the construction does not form a phraseological unit, mainly because of its direct-objectness and nominality.

Keywords: phraseological unit, compositionality, analysability, *until* phrase, PP object.

UNTIL PHRASES LIKE THOSE IN (1) BELOW,[1] contra Sumiyoshi (2011a, 2011b), Moon (1998), and Gries (2008), *inter alia*, should not be analysed as a phraseological unit. We are concerned specifically with the instances given in (1) in this paper. The underlined part of the sentences, schematically represented hereafter as '*have until* X *to* V', is referred to as a *sequence* rather than as a *construction* or *pattern*. The examples observed are often referred to as *constructions*, in keeping with one of the theories purporting to explain them. However, the theory-neutral term *sequence* is employed in the present paper, while the term *construction* or *pattern* is reserved for the hypothetical concepts proposed by Construction Grammar or Pattern Grammar. The transitive verb *have* is followed by the *until* prepositional phrase, which serves as the 'object' of the verb:[2]

[1] This work was made possible by funding provided by JSPS (Japan Society for the Promotion of Science), whose assistance is gratefully acknowledged (Grant-in-Aid for Scientific Research (C) No. 23520587 awarded to Kensei Sugayama). I would like to thank the two anonymous reviewers for their constructive and stimulating remarks, which helped the author to shape the development of the ideas presented here. The usual disclaimer applies.

[2] In this article, I will avoid commitment to the issues of the precise definition and examination of what the real object of the verb is like and of what the transitivity of the verb is, and use the term 'object' to refer to what comes immediately after the verb.

(1) a. O & Y said the company had until next week to find the money. (BNC: AJ9 334)[3]
b. Meanwhile staff at UCCA say universities and polytechnics have until the end of May to contact potential students. (BNC: K1J 529)
c. You have until tomorrow to think about the proposition. (BNC: GUU 777)
d. Existing workplaces will have until 1 January 1996 to comply. (BNC: CBU 3631)
e. Col Gaddafi has until April 15 to hand over two suspected bombers of the Pan Am flight over Lockerbie in 1988 or face UN sanctions including a cut-off of air traffic and arms sales and an enforced reduction of Libyan diplomatic representation abroad. (BNC: AHF 859)

In terms of semantics, what the sequence in the examples in (1) means is: someone or something has to do something by the time limit indicated, i.e. they have 'the time until X to V'. It cannot be, however, assumed that the sequence always appears with the verb *have*. We find further examples of verbs other than *have* taking this sequence in the corpora in (2).

(2) a. the case of the non-life insurance directive, some states have been **allowed** until 1998 or 1999 to bring their laws into line with the Community standard. (BNC: HH2 1342)
b. … technically to be introduced on Jan. 1, although the authorities were **given** until Jan. 15 to confirm provisions for its calculation and collection. (BNC: HL3 1984)
c. You **got** until the Saturday to pay it, but if you paid it then that let you …. (BNC: G63 306)
d. … at the rate she was paying it off, it would **take** until next Easter to clear it. 'Like a bologna sandwich?' he asked …. (BNC: CDN 939)

The examples in (2) are significant because they show that it might be possible for verbs other than *have* to appear with the sequence unless there is semantic inconsistency between the sense of the relevant verb and that of the *until* phrase. The semantic interpretation of the verb and the *until* phrase will be discussed later.

From a historical development perspective, the sequence is not a recent phenomenon. Citations of this sequence go back at least to Jespersen (1927) or earlier. Jespersen (1927:5) introduces the examples in (3) with various verbs including *have*.

(3) a. I **desired** till the next day to consider it.
b. You **have** till ten to-night.
c. Will you **allow** me till then?

Jespersen (1927: 5) claims that "[t]he combination of *till* with its object is treated as a primary[4] and thus may itself be the object or subject (meaning 'the time till …'), which strongly suggests that the *till* phrase means 'the time till X'.

[3] BNC stands for British National Corpus, which is available on line at http://www.natcorp.ox.ac.uk/. References below are abbreviated to BNC.

[4] Jespersen in his theory of ranks removes the parts of speech from the syntax, and differentiates between primaries, secondaries, and tertiaries; e.g., in *finely honed reflexes*, *reflexes* is a primary, this being defined by a secondary, *honed*, which again is defined by a tertiary *finely*.

On the other hand, the example in (4), which is from *The Literary Gazette; and Journal of Belles Lettres, Arts, Sciences & c.* (1825) and is a very interesting example, gives an important explanation of the sequence.

(4) He said, 'I shall cause read it to you.' After it was read, he said, 'what think ye of it?' I **desired** time to consider it, till the next court day. He said, 'Ye shall have no longer time to consider it.' (*The Literary Gazette* 415 (Sat. January 1, 1825): 438)

In this example, the object of the verb *desired* (bold, underlined) is time and later rephrased as *till the next court day*. Although the grammatical relation which obtains between the verb *desire* and the PP *till the next court day* is not clear, we could infer from this example that *time (to consider it)* in this text communicates practically the same message as *till the next court day*.

What is most interesting about the sequence are two observations:

- the object position is occupied by the *until/till* phrase, which normally does not function as a noun phrase, therefore should not function as the object for the verb;
- the sequence does not involve a process in which the *until/till* phrase is moved out of a position after the verb in the *to*-infinitival clause.

We argue that the *until* phrase in the sequence *have until* X *to* V behaves as NP and therefore should be categorised as such based on the proposed diagnostic set of evidence.[5]

1. A PHRASEOLOGICAL APPROACH. Surprisingly little work has been devoted to the phenomenon of the present sequence, if we compare this to the number of studies concerned with grammaticalisation in the last three decades (cf. Sugayama 2012, reporting the work of Brinton 1991). Sumiyoshi (2011a, 2011b, 2011c) is a corpus-based attempt to make a syntactic and semantic analysis of the sequence, especially in the framework of phraseology, and to deal with the question of how best to analyse the sequence. The following points are made in an analysis suggested in Sumiyoshi (2011b):

> [T]he sequence of words "*have until* X *to* V" (are seen) from a phraseological point of view. The discussion in this paper reveals three interesting characteristics of the unit, based on empirical data from corpora. First, the unit, in which duration-*until* is employed, expresses the time-limit meaning that is usually expressed by the preposition *by*.[6] Second, it is difficult to resort to traditional linguistic apparatuses such as intraposition[7] to explain the emergence of the sequence of words, which is chosen as a unit without regard to its internal syntactic structure. Third, corpora research reveals that the preposition *till* is

[5] Alternatively, consideration might be given to the possibility that '*until* X' is a PP, not an NP at all. I do not go in that direction mainly because my principal aim of the paper is to offer a plausible account of how '*until* X', though categorised as PP, can end up appearing in a position normally filled by an NP.

[6] One should bear in mind that, as one *LACUS* reviewer aptly notes, there is a contrast between the duration *until* and *by* (e.g., *you* **have until/till five** *to finish the assignment* vs. *you* **must have finished** *the assignment* **by five)**. The difference in tenses is obligatory, showing that the two prepositions differ in their relation to point vs. extension in time.

[7] Intraposition is a syntactic device whereby a syntactic element is moved leftward from the end of a sentence, changing the word order of the sentence. However, this line of argument is easy to refute. We will soon run into problems if we say that the *until*-phrase is moved to the position after the verb *have* from the end of the sentence.

> infrequently employed in the unit even though traditional grammar argues that *till* and *until* are exchangeable in most cases. This can be attributed to a stress clash caused by the sequence of *have till*. In addition, it can be observed that some variations of the unit are used, one of which is "*have until*-clause *to* V". All of these empirical facts point to the phraseological nature of "*have until* X *to* V". (Sumiyoshi 2011b: 153)

Sumiyoshi has further writes (2011b: 166-167):

> *Until* associated with events means that something continues until the events happen. Event expressions are allowed to occur with *until*. Nevertheless, time expressions are almost exclusively chosen in the X position of the phraseological unit "*have until* X *to* V"except for a few cases. What is listed in (5) represents words and phrases that characteristically occur in the X position of the phraseological unit. The data is based on the BNC:

(5) Words and phrases that occur in the X position of "*have until* X *to* V" (BNC (World Edition))
  a. time: *five o'clock* etc.
  b. days of the week: *Monday*; *next Wednesday* etc.
  c. dates: *1 January 1996*; *14 March*; *October eleven* etc.
  d. others: *tomorrow*; *tonight*; *the end of the day* [*this year*]; *then* etc.

If the open-choice principle is at work here, event nouns or subjectless *-ing* clauses should also occur in the X position, because these choices are also available to the speaker by default. However, the slot X is in almost all cases filled by a set of NPs denoting time. This suggests that"*have until* X"is chosen as a unit to express a particular meaning relevant to time.

The discussion so far about the syntactic characteristics of the phraseological unit "*have until* X *to* V" can be summarized as in (6):

(6) a. There is a stronger preference for *until* in this phraseological unit than *till*.[8]
  b. The *until*-prepositional phrase occurs in the object position of the transitive verb *have*, which is a permutation difficult to explain in conventional grammar.[9]
  c. The formation of the sequence of"*have until* X *to* V"cannot be explained by intraposition. This can be supported by the fact that the verbs in the *to*-infinitive clauses are momentary verbs,[10] which are not construed with *until*. Omission is also probably not involved in the formation of the unit.
  d. NPs following *until* are in most cases restricted to time expressions in this phraseological unit, although event nouns or *-ing* clauses should be permissible in the slot following *until* in default cases.

[8] As a *LACUS* reviewer notes, the reviewer finds *till* more colloquial, whilst the reviewer finds *until* more literary. In the reviewer's judgement, however, no difference is seen otherwise.
[9] Sumiyoshi seems to use the term 'conventional grammar' here to refer to 'traditional grammar'.
[10] An anonymous *LACUS* reviewer points out that 'telic' or 'perfective' works better than 'momentary' here: *you* have until eight *to finish the work*.

Apart from the definition of phraseological unit, there are a couple of problems with the phraseological account of the sequence. First, the phraseological approach leaves open the question of how the *until/till* phrase ends up appearing in the object position though it should be clear that PPs normally do not occupy the object position. Second, the status of phraseological unit. For example, is the sequence '*have until* X *to* V' in fact a phraseological unit? How and why should it be called a phraseological unit?

2. THE ANALYSIS. What we claim in this paper is that the *until* phrase in the sequence does not form a phraseological unit, mainly because of its direct-objectness and nominality. That is, the claim is based on, among other things, distributional properties of the *until* phrase, most notably its ability to stand for an NP and to serve as the object of the verb, implying that it also has a nominal property in category.

First we argue that the *until* phrase has direct-objectness. In terms of category, as far as we can see, it is an NP that functions as direct object. This claim is borne out by the examples such as the following, where the direct object of the verb is the *until* phrase and the verb includes not just *have*.

(7) a. The campaigners planned until Christmas in detail. (Jaworska 1986: 356)
b. The new tenants are reclaiming behind the garage. (Jaworska 1986:356)
c. The exhibition covered 1910 to 1930. (McCawley 1991: 41)

Furthermore, it is promoted to the subject position in the corresponding passives.

(8) a. Until Christmas was planned in detail. (Jaworska 1986: 356)
b. Behind the garage is being reclaimed by the new tenants. (Jaworska 1986:356)
c. Over a year was spent on this problem. (Huddleston & Pullum 2002: 646)

Note that in example (9), acceptability of PPs functioning as subjects in passives varies from speaker to speaker.

(9) a. %They planned until Christmas in detail. (Haegeman & Guéron 1996: 126)
b. %Until Christmas was planned in detail. (Haegeman & Guéron 1996: 126)
c. *Up here* still has to be cleaned. (Stephen King (1983), *Different Seasons*)

That the PP *until Christmas* functions as the subject and the object of the verb *planned* is confirmed by the fact that speakers accepting (7)a also accept (8)a in which the PP is the subject of a passive sentence (cf. Haegeman & Guéron 1996: 126). As is to be expected, speakers rejecting (7)b also reject (8)b.

Thus, the contrast in grammaticality between (9)b on the one hand and (9)c on the other, which is due to the speaker's accessibility of the time or place (or area) implied and denoted by the PP, supports a suggestion that was made by Jaworska (1986: 359) and Huddleston & Pullum (2002: 647), namely: the more likely the PP is to be interpreted to denote a place or time by the context or whatever is in the situation of the utterance, the easier it is to interpret the sentence.

We now know that it is confirmed that passive sentences with PP subjects are more or less acceptable to varying degrees. In addition, we also know that NPs typically appear in the object position of transitive sentences. Given these facts, it might be possible to argue that the *until*

phrase in the sequence is categorized as NP and bears the grammatical function of object to the verb.

Turning now to a justification of a broader claim that PPs generally have a nominal property in syntax, there is some evidence, however, primarily in the nature of the PP subject, for the existence of nominality. First the PP in the subject position can contract onto the following auxiliary verb (if any), whereas a promoted or thematized PP can not.

(10) a. Between two o'clock and getting up's the worst time. (Jespersen 1927: 5)
b. Under the rug's the safest spot. (Kaisse 1985: 49)
c. Under the bed's a great restaurant. (Bresnan 1994: 111)
d. Under this slab {is/*'s} buried Joan of Arc. (Kaisse 1985: 48)

What contracts onto the auxiliary verb is generally an NP, which in turn suggests that PP is an NP, because contraction takes place between the subject NP and the adjacent auxiliary verb.

According to Kaisse (1985: 48-49), some native speakers of English do not find the *'s* in (10)d as egregious as in the parallel examples with participle preposing or comparative substitution. We think it is important to take into account the ungrammaticality of the example, because it bears crucially on the difference in the position of the preposed PPs of two kinds in the syntactic structure of the sentence. PPs used as subjects (hence immediately dominated by S) do act as hosts for reduced auxiliaries, including the *be*. Those preposed PPs of Focus Inversion Constructions (hereafter referred to as FI Constructions), as in (10)d, which are on the other hand inserted under a higher node than S (e.g., COMP), do not (cf. Emonds 1976).

Further evidence of the postulated nominal feature of PPs is agreement between the PP in the subject position and the verb as the examples in (11) show.

(11) a. *From Boston to New York* ***is*** two hundred miles. (Quirk *et al*. 1985: 1392)
b. *In the evening* ***is*** best for me. (Quirk *et al*. 1985: 755)
c. *From here to there* ***is*** a long way. (Williams 1984: 662)
d. *Under the bed* ***is*** a nice place to hide. (Williams 1984: 662)

In contemporary English all the elements showing agreement with the finite verb are NPs. In the account developed here, therefore, it is quite natural to conclude that the *until* PP in the subject position is categorized as NP.

The reason why the PP in the subject position has to be categorized as NP is that the PP agrees with the verb in number. In contemporary English, by default, what agrees with the verb is nothing but the subject NP. To be more precise, we assume that agreement is the one in terms of features realised between the head of the subject NP and the verb in the level of morphology. However, the subject PP presents an analytical problem, because PP has an exocentric structure, which means that there is no lexical head in the internal structure of the phrase itself. With the lack of a lexical head in the structure of PP, what must be accounted for how agreement between the subject PP and the verb is achieved.

Consider examples in (12) from Levine (1989: 1015).

(12) a. *Under the bed* ***isn't*** the best place to leave your toys.
b. **Under the bed* ***are*** not the best places to leave your toys.

The negative element, as just indicated, disqualifies (12)b as a possible FI Construction, so that the only alternative reading available is a PP subject interpretation; compare the grammatical (12)a. The negative in (12)b thus in a sense serves to reveal properties of PP subject constructions, and the undesirability of (12)b under this interpretation, in contrast with the straightforward (12)a, shows that PP subjects and their PP controlees must agree in number.

Now consider (13) from Levine (1989:1014-15).

(13) a. *In the garden* ***stands*** a fountain. (Levine 1989: 1014)
b. *In the garden doesn't ***stand*** a fountain. (Levine 1989: 1015)
c. *In the garden* ***stand*** two fountains. (ibid.)
d. *In the garden ***stands*** two fountains. (ibid.)

The examples in (12)a and (13)a are superficially similar to each other but have different syntactic structures and can be distinguished along the lines discussed below.
In (12)a the adverbial PP does not occur as sister to a clause, but rather occupies a position immediately preceding the matrix (finite) verb. Unlike other sentence types in which PPs occur preverbally, such as (12)a, (13)a does not seem to permit AUX negation, as in (13)b.

Furthermore, while in examples like (12)a the verb is always singular, even when the copular complement is plural, in FI Constructions verbs always show agreement with this complement as in (13)a and (13)c.

There is a related phenomenon involving the agreement between the subject and the verb. If in (12)b we substitute a conjunction of PPs, the result is straightforwardly acceptable, and we do indeed find plural morphology on the following verb, as in (14)0a and (14)b.

(14) a. *Under the bed* and *in the fireplace* ***are*** not the best (combinations of) places to leave your toys. (Levine 1989: 1015)[11]
b. *Under the bed and under the table* ***are*** (****is***) good for sleeping. (Arimura 1987: 22)[12]

Observe the contrast in (15). The covariation of verbal agreement morphology with PP in (12)a and (14)a, as opposed to covariation in agreement with the postverbal NP in (13)c and (13)d, seems to point to a pretheoretical characterization of the PPs in cases like (12)a–but not the preverbal PPs in FI Constructions–as SUBJECTS of the VP.

(15) *Down through the hills* and *into the forest* ***flows/*flow*** the little brook. (Levine 1989: 1015)

Prepositional Phrase Subject Construction has been discussed in papers by Stowell (1981), Safir (1983), Williams (1984), Chametzky (1985), Arimura (1987), Jaworska (1986), Tsuboi (1990a, 1990b), Wada (1991), Haegeman & Guéron (1994), Bresnan (1994), Idehara (1998), Matsubara (2003, 2009), and Iwasaki (2007, 2008), among others. Here we do not look into the category of syntactic elements that can fill the subject position of the copular verb. We

[11] Here *under the bed* has to be interpreted as 'that area under the bed', and *in the fireplace* has to be interpreted as 'that area in the fireplace'.
[12] The intended meaning of *under the table* is obviously 'that area under the table'.

conjecture, however, that the subject position of the copular construction is a special position. It is widely recognized that phrases other than NPs actually appear in this position. For example, an adjectival phrase can appear in the subject position, as the examples in (16)a and (16)b show.[13]

(16) a. One minute late is OK right? (http://talk.collegeconfidential.com/common-application/843807-one-minute-late-ok-right.html,1st July 2011a)
b. Relaxed is what Mary wants to be. (Williams 1984: 662)

Although we observe above that elements other than NPs actually appear in the subject position, we do not believe that it undermines our claim that the PP in the subject position is an NP. We might suggest that there does seem to be an independent factor which renders the sentences in (16) acceptable, i.e., the special status of the subject (position). It should be noted that any phrase, once it is recognised by the speaker as a quote, can realize as the subject regardless of its lexical category. This hypothesis is borne out by the examples in (16).

Another indication of PP's nominality is that PPs can be an antecedent of pronouns. There is a straightforward example of the relative pronoun which refers to its PP antecedent *from Sunshine Beach to Noosa* in (17)a.

(17) a. We walked *from Sunshine Beach to Noosa*, ***which*** is a beautiful stretch of coast. (Huddleston & Pullum 2002: 688)
b. We drove *from Manchester to London*, ***a distance*** of 180 miles. (Huddleston & Pullum 2002: 688)

The example in (17)b has the NP *a distance* rather than a pronoun, which paraphrases the PP antecedent *from Manchester to London*. This substitution cannot be possible unless the PP *from Manchester to London* has nominal property.

Further evidence that the subject PP (meaning either location or time) has a nominal property can be seen in (18), taken from Chametzky (1985: 38).

(18) a. Under my bed makes a good hiding place, but ***it/*there*** is a lousy place to keep raw liver.
b. From 7:00 to 8:00 seems like a good time to have dinner to me, but ***it/*then*** strikes Kim as too late.

Whereas the adverb *there* cannot be a proform for *under my bed*, the pronoun *it* can, as in (18)a. The examples in (18) confirm that the PPs in the subject position denote a place which can be construed as a nominal entity.

Finally, if the analyses outlined above are correct, they explain how the copula *be* can link a PP and an NP. The reason is that a PP in the subject position shows nominal property, as exemplified in (19), taken from Huddleston & Pullum (2002: 689).

(19) a. From Sunshine Beach to Noosa is ***a beautiful stretch*** of coast.

[13] Recall that Stowell (1981), whose work is concerned with the distribution of syntactic categories, claims that subject PPs "appear to be strictly limited to copular constructions" (1981: 225 n. 43, and p. 268). A similar claim is implicit in Safir (1983) and is made explicit by Williams (1984: 663).

b. From Manchester to London is ***a distance*** of 180 miles.

Let us briefly explain how nominality is construed out of the *until* phrase and how it is structured in its semantics. According to Bennett (1975: 98-99), example (20) describes the duration of the film, even though no source or path expression is present.

(20) The film lasted *until nine o'clock*.

His analysis strongly suggests that the *until* X phrase has a semantic structure something like the following.

- *Until* X: (source)-path [extent]-end point [X]
- path [extent] = space of time [duration] ending at the end point

The semantics of *until* X is composed of an optional source element, a path, and an end point, which together define an extent. Semantically the path (i.e. space of time) denotes a nominal entity and corresponds to nominality in syntax. The reason we have to make the source optional is because there are examples like (20), which lacks the source element and still means the path to somewhere. In both cases the source is recoverable from context, linguistic or pragmatic.

(20) ***To York*** is not very far (Quirk *et al*. 1985: 749).

All these pieces of evidence show that PPs are in fact NPs in category.

3. CONCLUSION. In conclusion, our discussion has shown the three crucial points of the *until* phrase in the sequence *have until* X *to do* Y.

- the *until* phrase in the sequence is the object of a verb and it also appears as the subject with other verbs than *have*.
- the *until* phrase is best described as NP because it carries referentiality in its semantics, i.e. it refers to a certain temporal entity in the speaker's mind.
- the semantic structure of *until* X is (source) − path − end point [= extent]

It should be easy to see from these points how the sequence can be interpreted compositionally rather than non-compositionally.

Overall, it is clear that the *until* phrase in the sequence has the object relation to the verb *have*, and the sequence can be decomposed and still maintain compositionality, although its frequency is quite high in contemporary English.

Jaworska (1986: 359) convincingly argues that PPs behaving like NPs must be referential. We believe that grammar does not license those PPs behaving like NPs unless they are construed by the speaker to refer to a concrete place or a certain space of time. A similar argument is also made by Huddleston & Pullum (2002: 647).

Sinclair (1991: 110) gives the definition of Idiom Principle as in (21).

(21) Idiom Principle (*alias* Principle of Idiom):
The principle of idiom is that a language user has available to him or her a large number of semi-preconstructed phrases that constitute single choices, even though they might appear to

be analysable into segments. (Sinclair 1991: 110)

What this principle says is that there are restrictions on choice which go beyond those of grammar and register: even the tendencies toward the simultaneous choice of more than one word, represented by some degree of fixity in the structure of a phrase or a strong collocational, syntactic or semantic patterning associated with a word or phrase, form significant restrictions on the open-choice principle (cf. Barnbrook 2009: 26).
The Idiom Principle is likely to play a considerable role in the patternings of collocations.

However, our investigations indicate that the sequence '*have until* X *to* V' is syntactically and semantically analyzable in the level of grammar. This is one of the observations that argues in favour of compositionality for lexical and constructional meanings.

REFERENCES

ARIMURA, KANEAKI. 1987. On Prepositional Phrases as subjects. *The Rising Generation* 133(1): 22.

BARNBROOK, GEOFF. 2009. Sinclair on collocation. In *Words, Grammar, Text: Revisiting the Work of John Sinclair*, ed. by Rosamund Moon, 23-38. Amsterdam: John Benjamins.

BENNETT, DAVID C. 1975. *Spatial and temporal uses of English prepositions: An essay in Stratificational Semantics*. London: Longman Group Ltd.

BNCWEB (CQP-EDITION). Available at http://bncweb.lancs.ac.uk/cgi-binbncXML/BNCquery.pl?theQuery=search&urlTest=yes.

BRESNAN, JOAN. 1994. Locative inversion and the architecture of Universal Grammar. *Language* 70: 72-131.

BRINTON, LAUREL. 1991. The origin and development of quasimodal *have to* in English. Paper presented at the Workshop on "The Origin and Development of Verbal Periphrases," 10th International Conference on Historical Linguistics (ICHL 10) Amsterdam, August 16, 1991. Available at http://faculty.arts.ubc.ca/lbrinton/.

CHAMETZKY, ROBERT. 1985. NPs or arguments: Exocentricity vs. predication. *CLS* 21(1): 26-39.

EMONDS, JOSEPH. 1976. *A transformational approach to English syntax*. New York: Academic Press.

GRIES, STEFAN TH. 2008. Phraseology and linguistic theory: A brief survey. In *Phraseology: An interdisciplinary perspective,* ed. by Sylviane Granger & Fanny Meunier, 3-25. Amsterdam: John Benjamins.

HAEGEMAN, LILLIAN, & JACQUELINE GUÉRON. 1999. *English grammar*. Oxford: Blackwell.

HUDDLESTON, RODNEY D., & GEOFFREY K. PULLUM. 2002. *The Cambridge grammar of the English language*. Cambridge: Cambridge University Press.

IDEHARA, KEN-ICHI. 1998. Notes on prepositional phrases as subjects: From viewpoints of cognitive grammar and affordance theory. *Studies in Humanities. Culture and Communication* 32: 25-36.

IWASAKI, HIROYUKI. 2007. On the prepositional subject constructions. *Tsukuba English Studies* 26: 109-26.

---. 2008. Constraints on the predicates of prepositional subject constructions. *JELS* 25: 91-100.

JAWORSKA, EWA. 1986. Prepositional phrases as subjects and objects. *Journal of Linguistics* 22: 355-74.

JESPERSEN, OTTO. 1927. *A modern English grammar on historical principles*. Part III. Syntax, 2nd vol. Copenhagen: Munksgaard.
KAISSE, ELLEN M. 1985. *Connected speech*. Orlando, FL: Academic Press.
LEVINE, ROBERT D. 1989. On focus inversion: Syntactic valence and the role of a SUBCAT List. *Linguistics* 27: 1013–55.
MCCAWLEY, JAMES D. 1991. *A linguistic flea*. Bloomington, IN: Indiana University Linguistics Club.
MATSUBARA, FUMINORI. 2003. Syntactic and semantic conditions for prepositional phrases as subjects. *Studies in English grammar and usage* 10: 135-48.
---. 2009. Licensing conditions for prepositional phrases as subjects. *Studies in English grammar and usage* 16: 35-51.
MOON, ROSAMUND. 1998. *Fixed expressions and idioms in English: a corpus-based approach*. Oxford: Oxford University Press.
QUIRK, RANDOLPH, SIDNEY GREENBAUM, GEOFFREY LEECH, & JAN SVARTVIK. I985. *A comprehensive grammar of the English language*. Harlow: Longman.
SAFIR, KEN. 1983. On small clauses as constituents. *Linguistic Inquiry* 14: 730-35.
SINCLAIR, JOHN M. 1991. *Corpus, concordance, collocation*. Oxford: Oxford University Press.
STOWELL, TIMOTHY A. 1981. *Origins of phrase structure*. Doctoral dissertation, MIT.
SUGAYAMA, KENSEI. 2012. Is *have until* X *to* V really a phraseological unit?: Notes on the *until* phrase appearing in the object position. *Observing the language*, ed. by Akiko Yoshimura *et al*., 109-118. Tokyo: Eihosha.
SUMIYOSHI, MAKOTO. 2011a. The *until* phrase in the object position: A case of *have until* X *to* V. *The English teacher's magazine* 59 (12): 69-72.
---. 2011b. Non-compositionality, syntactic irregularity and phraseology: An analysis of *Have until* X *to* V. In *Focal issues on phraseological studies 1*, ed. by Joanna Szerszunowicz, 153-75. Białystok, Poland: University of Białystok Publishing House.
---. 2011c. On *have until* X *to* V: A reply to the question in the April issue. *The English teachers' magazine* 60(3): 89-91.
TRAUGOTT, ELIZABETH CLOSS. 1982. From propositional to textual and expressive meanings: Some semantic-pragmatic aspects of grammaticalization. In *Perspectives on historical linguistics*, ed. by Winfred P.Lehmann & Yakov Malkiel, 245-71. Amsterdam: Benjamins.
---. 1988. Pragmatic strengthening and grammaticalization. *BLS* 14: 406-16.
---. 1989. On the rise of epistemic meanings in English: An example of subjectification in semantic change. *Language* 57: 33-65.
TSUBOI, EIJIRO. 1990a. 'Prepositional subjects' and the category specification of the subject. *Bulletin of the University of Electro-Communications* 3(1): 173-82.
---. 1990b. Theory of category-neutral subject and non-uniformity of non-NP subjects. *Bulletin of the University of Electro-Communications* 3(2): 313-22.
WADA, SHIRO. 1991. Prepositions and constructions with PPs serving as subjects. In *Advances in modern English linguistics*, ed. by the Publication Committee for a Festschrift for Dr Minoru Yasui's 70th Birthday, 141-50. Tokyo: Kaitakusha.
WILLIAMS, EDWIN. 1984. Grammatical relations. *Linguistic Inquiry* 15: 639-73.

This article was first published at www.lacussquare.org.

LACUS Forum **39:2.69-79 (2025)**

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"IT'S DÉJÀ VU ALL OVER AGAIN": ARE REDUNDANCIES SPEECH ERRORS?

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Abstract: Redundancies or pleonasms are ruthlessly expunged by composition teachers and editors, but it is unclear whether they are errors or just stylistically undesirable. Using examples of English and Polish redundancies, we show that redundancies reify much of a stratified relational network model of linguistic structure and are at least compatible with the mechanisms advanced to explain other speech errors we have studied. We conclude with a hypothesis that can explain the occurrence of redundancies.

Keywords: Redundancies, pleonasms, speech errors, blends, timing errors, tactic pattern errors, relational network theory, strata

Languages: English, Polish

OUR PREVIOUS WORK ON SPEECH ERRORS in English and Polish (cf. Sullivan 2011, Sullivan & Tsiang in press, Tsiang & Sullivan in press) is aimed at the insights errors provide on how linguistic utterances are encoded and decoded and what this allows us to deduce about the logic of the system underlying the storage and processing of linguistic communication. We have also been studying errors relative to their compatibility with neurocognitive stratificational theory, a relational network approach to linguistics. Previous work has considered timing errors (anticipation, perseveration, spoonerisms), tactic pattern errors, and unintended blends. The results of these studies showed that the basic assumptions of the theory used are valid. We recapitulate them in the conclusion. First, we review the appearance of redundancies in our data set and consider their implications for understanding the human linguistic system.

1. DATA GATHERING. There are two methods of gathering examples of performance or speech errors: forcing errors, e.g., by requiring subjects to read or speak at a rate that is faster than normal for them or under other abnormal circumstances, OR serendipitously, taking down whatever is observed as it happens. Each method has its advantages and drawbacks, but we have chosen the serendipitous method as evincing what happens under environmentally normal circumstances.

WJS first started gathering error samples in Poland and gave error gathering as part of the assigned work for classes in real language processing. The instructions were for students to submit anything they heard from a native speaker that they thought was erroneous or in any way anomalous. There were questions. What constitutes an error? (Let's say, anything you don't like.) How much do you need beyond the error itself? (Provide what context you can.) Can it be in writing? (Yes, but indicate that you're providing a written example.) As WJS's courses are in the English institute of a Polish university, the idea behind all research and assignments is to juxtapose findings in both English and Polish. The examples WJS and his students had first collected were heavily weighted toward Polish. ST was invited to join the project, and with help from Katarina Starčević, provided the majority of the English-language examples.[1]

At first, timing errors were the most numerous in the data set (Sullivan 2011). Examination of the remaining errors showed a large number of tactic pattern errors (Sullivan & Tsiang in press). The data set kept growing, and many unclassified errors turned out to be amenable to analysis as unintended blends (Tsiang & Sullivan in press). But it was also the case that a few Polish students had been turning in examples of apparent redundancies since the beginning, probably because they are made painfully aware of redundancies (also called pleonasms) in their composition classes. As editors, the authors at first considered redundancies stylistic infelicities, rather than errors. But we were finally convinced by the persistence of the students, since redundancies fell within their instructions.

Still, it wasn't clear to us that redundancies are the same kinds of performance errors as the other types submitted or, indeed, whether they are errors at all, hence the question mark in our title. However, given the parameters we set up, ignoring them would require justification. We decided on classification and analysis.

2. REDUNDANCIES AND PERFORMANCE ERRORS.

2.1. THE LINGUISTIC MODEL. Our analyses relate the previously studied speech errors to a stratified relational network model like that illustrated in **Figure 1**. **Figure 1** represents a pure relational network interconnecting a sequenced cognitive store with the physiological organs involved in the production and perception of sounds. During encoding, i.e., the production process, simultaneous input from the cognitive store is provided by spreading activation to sememes in the semology. The cognitive store, as indicated by the arrows, can provide input at other strata during the processing, though most messages that originate in the store and are communicated linguistically probably enter semology at the top. The semotactics groups active sememes into what we call predications and sequences of predications. The sememes in any given predication are not sequenced. Soon after the semotactics begins processing, the activation starts spreading to the syntax and the lexotactics starts its work. Predications are related to phrases or clauses, sememes are related to lexemes, and lexemes are sequenced across their phrase or clause. And so on through the linguistic system, until a fully sequenced set of signals is sent to the motor cortex. The decoding process we envision with regard to sequencing is very roughly the reverse, generally beginning with the auditory systems and working its way up the system, gradually eliminating sequencing until it produces a full picture to the cognitive store.

[1] Mary Sullivan contributed a body of errors she observed in the speech of WJS.

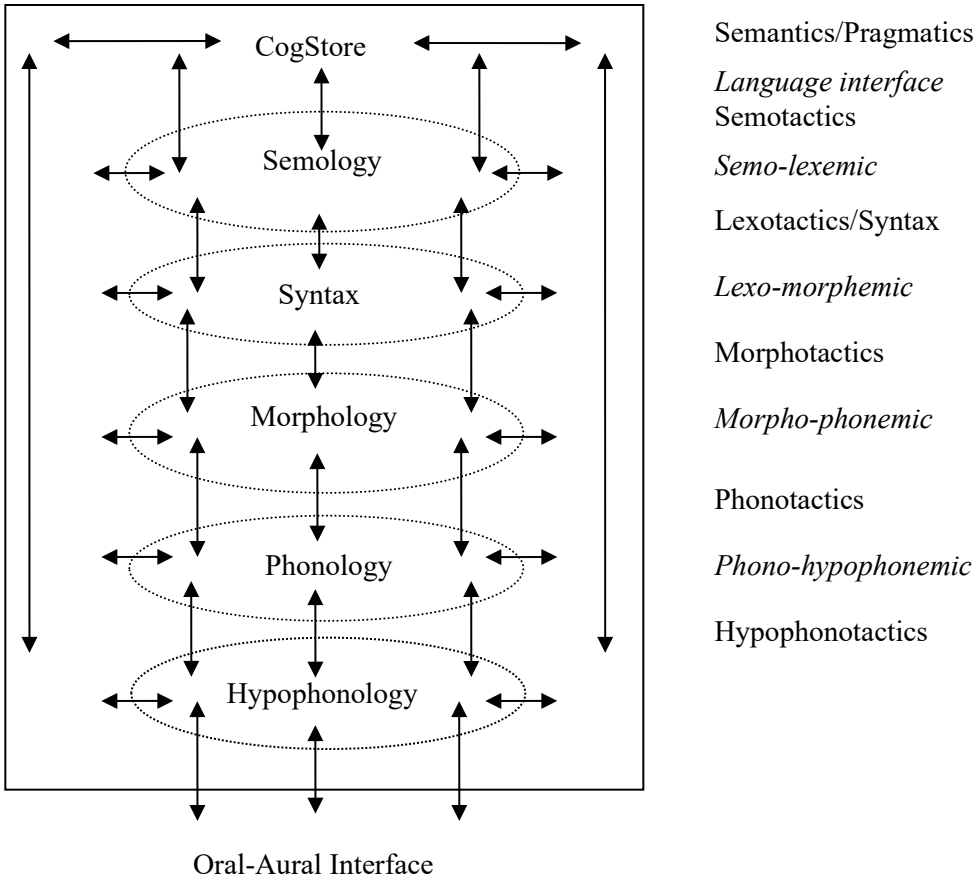

Figure 1. *Outline of the linguistic system, relative to the cognitive store.*

There is no reason to suppose that the spreading activation, once begun, continues uninterrupted until the output is complete. Other physiological systems, such as muscles, operate in a complex fashion; sometimes muscles contract and relax in sequence, sometimes simultaneously. When not contracting, a muscle may rest. Similarly, we may assume that the activation process during encoding or decoding operates with random rest periods of this or that part of the network. So long as one stratum does not get out of synch with the adjacent strata, we have the production and comprehension of error-free speech. But biological systems are not machines. Rest periods occur and asynchronies and errors appear.

2.2. COMMON CHARACTERISTICS OF PERFORMANCE ERRORS. We have studied three types of errors to date: timing errors, tactic pattern errors, and unintended blends. The three types of errors share some significant properties. Timing errors and unintended blends result from the interaction of two adjacent strata, where random rest periods during spreading activation may cause the strata to get out of synch. They and tactic pattern errors result from the sequencing, on a lower stratum, of emes whose sequence was not provided on the next higher stratum. Each error-type provides evidence for the five strata in **Figure 1** and is compatible with the hypotheses of spreading activation and random rest periods.

Note that not all questions about the material already analyzed have been answered. Some

problems of classification remain. Some examples cannot be unambiguously assigned to a single type. For example, *berlio* 'Silvio Berlusconi' combines a semo-lexemic spoonerism with a phonological blend (cf. Tsiang & Sullivan in press). Moreover, some examples must be analyzed as showing two distinct errors of the same sort. For example, *a bosket of bix* 'a box of biscuits' shows a semo-lexemic spoonerism of the two nouns followed by a morpho-phonemic spoonerism of the two stressed vowels. Closer non-invasive observation of the operation of the brain may shed more light on the entire process. We have, however, already traveled some distance in our study of these speech errors. We turn now to redundancies.

2.3. WHAT REDUNDANCIES ARE (NOT). Redundancies present a number of problems, relative to the errors listed above. Explaining redundancies does not require adjacent strata, random rest periods, or partial sequencing of unsequenced material. But they are compatible with these explanations of other speech errors. There are certain related questions that can be raised. First, some redundancies might be examples of blends or perseveration. If they are perseverations, it puts these redundancies into the category of timing errors. Second, what is the difference, if any, between redundancy and simple repetition? Third, what about the interplay between semantics and form in deciding whether something is a redundancy or a repetition, a redundancy or a blend?

Before attempting to provide any answers here, we must establish the criteria by which we classify the redundancies collected, relative to **Figure 1**.

3. THE DATA SET. Our preliminary data set consisted of over 200 examples. Three problems with redundancies became immediately obvious: they were not clearly a consequence of and predicted by the spreading activation/random rest periods/stratum-by-stratum sequencing model that had provided insights to previously analyzed error types, they were not clearly errors in the same sense as previous error types, and we had no prior mode of classifying them. We return to the first two problems in the discussion and start with the mode of classification.

In general, a redundancy can be classified as having appeared on a particular stratum by the stratum on which the redundant parts of the utterance are emic. Thus, if the redundant elements are morphemes, e.g., an imperfectivizing suffix in Polish or a comparative suffix in English, we consider it a morphological redundancy. If the redundant parts are lexemes, we consider it a syntactic redundancy. If an entire predication must be decoded to produce the redundancy, we consider it a semological redundancy. One of the observations we made during this classification was that there are expressions that seem to be inherently redundant, just as there are expressions that are inherently contradictory. Often enough a redundant expression requires reference to two strata to identify the redundant emic source. There are also cases with redundancies on more than one stratum.

The specifics are clarified in section 4, to which we now turn.

4. A TAXONOMY OF REDUNDANCIES. No phonological or hypophonological redundancies were gathered, a fact we return to in the discussion. Other than that, it appears that approximately the same number of redundancies were gathered relative to each of the three higher strata and possibly to the cognitive store itself. We work from the bottom, beginning with morphological redundancies, and work our way upward, according to the model in **Figure 1**.

4.1. MORPHOLOGICAL REDUNDANCIES.

4.1.1. ENGLISH MORPHOLOGICAL REDUNDANCIES. A sample of English morphological redundancies is given in **Table 1**.

Observed form	Redundancy
There was at least one assassinization attempt	*iz ... at*
one of the most hardest hit areas	*most ... est*
I had tooken the chance	*took ... en*

Table 1. *English morphological redundancies.*

In *assassinization* there are two verb-forming suffixes, *ize* as in *finalize* and *ate*, as in *culminate*. With such suffixes there are dialect differences. US standard *orient* contrasts with UK standard *orientate*. However, doubling the verb formants cannot be ascribed to dialect. Dialect differences aside, examples like this are not rare.

Most hardest has two morphemes signaling superlative. Examples like this and the parallel comparative *more better* are numerous. Again, dialect differences may appear, as in *firstest* and *onliest*, where the stem morpheme is inherently superlative but a superlative suffix is added. But *most hardest* was spoken by a standard English speaker.

Had tooken is difficult to analyze, because there are many problems here. In context, the simple past tense would have been appropriate here. Because of the formal, tension-filled situation (in court before Judge Judy), the speaker used the pluperfect, which is felt by some to be more elegant or more formal. Other morphologically aberrant pluperfect forms were observed with parallel or partially parallel construction (e.g., *had came*) in the speech of many native speakers. However, the existence of three morphemes that otherwise signal past time (*d*, *oo*, *en*) surely qualifies as a redundant construct.[2]

Note that in all these cases, the morphemic forms differ, though their meanings are the same. It is the meanings that produce redundancy. The formal discrepancy is what distinguishes redundancies from simple repetition here.

4.1.2. POLISH MORPHOLOGICAL REDUNDANCIES. A sample of Polish morphological redundancies is given in **Table 2**.

Observed form	Correct form	Gloss	Redundancy
głupsiejszy	*głupszy*	stupider	*siej... sz*
zobowiązowana	*zobowiązana*	obligated	*ow ... a*
nie wylogowywuj mnie	*wylogowuj*	log out	*yw ... uj*

Table 2. *Polish morphological redundancies.*

Again, the three examples in **Table 2** represent many tokens of each type. *Głupsiejszy* 'stupider' has two comparative extensions, as indicated. There are also examples of redundant comparatives or superlatives with the appropriate form of *bardzo* 'very', e.g., *bardziej szczęśliwszy*

[2] The standard pluperfect, *had taken*, has two past time morphemes. But according to Halliday's description of English verb tenses, the best WJS has ever seen, pluperfect communicates an embedded past time: past in past. Under this analysis, two past time morphemes are required for communication.

'more happier'. *Zobowiązowana* 'obligated' parallels *assassinization* by having two verb formant suffixes. *Wylogowywuj* 'log out' has two imperfectivizing suffixes, one (*yw*) in the infinitive form and the other (*uj*) in the present tense form.[3]

These examples, like the English ones, display differences in form, even if the difference in *wylogowywuj* is basically morphophonemic.

These examples exhaust the morphological types of Polish redundancies. We turn now to syntactic redundancies.

4.2. SYNTACTIC REDUNDANCIES.

4.2.1. ENGLISH SYNTACTIC REDUNDANCIES.

A representative sample of different types of English language syntactic redundancies is given in **Table 3**.

Observed form	**Redundancy**
instead of slamming the door closed	*slam ... closed*
I returned the book back to the library	*return ... back*
and just continued on with the concert	*continue ... on*
then the market would self-regulate itself	*self-regulate ... itself*
collectively as a group	*collectively as a group*
Is that a real, authentic fact?	*real*, *authentic*, *fact*

Table 3. *English syntactic redundancies.*

The first three redundancies in **Table 3**, *slam ... closed*, *return ... back*, and *continue ... on*, involve a verb and some complement: an adjective, an adverb, and a preposition used adverbially. In each case the complement reifies the meaning of the verb. You can slam different things, e.g., drawers or lockers, but the prototypical situation involves a door that was open before and closed after. Similarly, returning something involves giving it back and *continuing (with) the concert* means the same as *continuing on*. In these examples the redundancy is implicit, because it only becomes clear when the verb is paraphrased or its meaning is made clear.

Then the market would self-regulate itself is the same kind of redundancy syntactically as the preceding three, but the redundancy is explicit. No paraphrase is necessary to see the redundancy.

Collectively as a group involves a different syntactic structure, an adverb with a comparative qualifier, but *as a group* in context means the same as *collectively.*

Finally, if something is a fact, it must be authentic. Facts are, logically speaking, true propositions, rather than things, so the question of reality doesn't really arise. But again, to most people, if something is a fact, it is real, making this doubly redundant.

We turn now to Polish examples.

4.2.2. POLISH SYNTACTIC REDUNDANCIES.

A sample of Polish syntactic redundancies is given in

[3] Barbara Bacz points out to us that *wylogowywuj* is all right if intended as a frequentative, e.g., *Zawsze mnie wylogowywuje, jak chcę wysłać mail* 'it's always logging me out as I try to send an email'. She is, of course, correct. But the observed form was a simple clause in isolation, spoken to the other person in the room, as the speaker left his workstation.

Table 4.

Observed form	**Correct form**
w miesiącu marcu 'in the month of March'	*w marcu* 'in March'
w mieście Lublinie 'in the city of Lublin'	*w Lublinie* 'in Lublin'
w roku A.D. 2010 'in the year Anno Domini 2010'	*w roku 2010* 'in the year 2010' *w A.D. 2010* 'in A. D. 2010'
na wskutek '?onto/into a result'	*wskutek* 'as a result' *na skutek* 'as a result'
kontynuować dalej przemówienie 'continue further the speech'	*kontynuować przemówienie* 'continue the speech'
... oparte na faktach autentycznych '... based on authentic facts'	*... oparte na faktach* '... based on facts'
ostatnie dwa lata wsteczne do tyłu 'the last two years ago back'	*ostatnie dwa lata* 'the last two years'

Table 4. *Polish syntactic redundancies.*

Professor Alexander Schenker (personal communication) called the first three examples hypercorrect expressions. March is a month and Lublin is a city, so the words meaning month and city are indeed unnecessary here.[4] *W roku* 'in the year' means the same thing as *anno* 'in the year'. Each correct form eliminates one of the two redundant elements. *W roku* is more colloquial, *w A.D.* is more high style, but they are otherwise identical and thus the form observed is clearly redundant.[5]

Na wskutek has the accusative form of *skutek* 'result' with two goal morphemes, *w* 'into' and *na* 'onto' that govern accusative. Either one can be used with non-concrete or abstract objects, as the two acceptable expressions show, but using two is redundant.

Kontynuować dalej przemówienie 'continue further the speech' and *oparte na faktach autentycznych* 'based on authentic facts' could almost be translations of the corresponding English examples (cf. **Table 3**).

Finally, *ostatnie dwa lata wsteczne do tyłu* 'the last two years ago back' is more than a single redundancy. The last two years in such a context refers to the two years prior to the moment of speech. *Do tyłu* 'to the rear, back' refers to time prior to the moment of speech in a temporal expression, and so does *wsteczne* 'ago'. In fact, this is a sememic redundancy as well as a syntactic one.

In sum, the Polish examples parallel the English examples. We now turn to sememic redundancies.

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[4] Barbara Bacz (pc) provides an interesting comment here. "Note that in the example with *miasto*, the case of the two forms is the same, which suggests that the speaker is familiar with the city. It often happens, with localities like *miasto*, *miasteczko, miejscowość* that the place's name is in the Nominative (when the town is smaller or possibly unknown to the interlocutor), and then, there will be no redundancy: *Pochodzę z miasta Nieszawa*(G) 'I come from the city of Nieszaw' is fine, but *Pochodzę z miasta Warszawy*(G)'I come from the city of Warsaw' fits with Schenker's hypercorrect forms. On the other hand, *On pochodzi z miasta Lodzi* 'He comes from the city of Łódź' is acceptable because of the rhyme (cf. Bacz 1992)."

[5] Barbara Bacz (pc) also reminds us that *w Roku Pańskim 2010*, a formal Polish translation of Anno Domini 2010, is also available.

4.3. SEMEMIC REDUNDANCIES.

4.3.1. ENGLISH SEMEMIC REDUNDANCIES. A sample of English sememic redundancies is given in **Table 5**.

Observed form	**Redundancy**
do you need the instructions before I come back or now?	*before I come back ... now*
... between a husband and wife, who are both of the grandparent generation	*husband and wife ... both*
everyone is beginning to realize that you need the infrastructure that you need	*you need the infrastructure ... that you need*

Table 5. *English sememic redundancies.*

Do you need the instructions before I come back or now shows a redundancy between a predication, the subclause *before I come back*, and the adverb *now*. In *between a husband and wife, who are both of the grandparent generation* we identify the redundancy as being between a compound noun phrase *husband and wife* and pronominal *both*. We consider this a sememic redundancy because you need to process two clauses before you run across the redundancy.[6]

The third example is somewhat more problematic. *That you need the infrastructure that you need* could be analyzed as a cogno-sememic perseveration. But in fact the second *that* is a relative pronoun and the first one is a subordinating conjunction. On balance, therefore, we consider it a redundancy without ruling out the possibility of perseverative influence.

4.3.2. POLISH SEMEMIC REDUNDANCIES. A sample of Polish sememic redundancies is given in **Table 6**.

Observed form	**Correct form**
paczka papierosów podrożeje średnio o około trzydieści groszy 'a pack of cigarettes will increase by an average of exactly about 30 groszy'	*paczka papierosów podrożeje średnio o trzydieści groszy* 'a pack of cigarettes will increase by an average of exactly 30 groszy' **OR** *paczka papierosów podrożeje około trzydziestu groszy* 'a pack of cigarettes will increase by about 30 groszy'
że jej się brechtać śmieje 'that she laughs a laugh'	*brechta się* **OR** *śmieje się* 'she laughs'
ten gość był byłym majorem 'that guest was a former major'	*... był majorem* 'was a major' **OR** *... jest byłym majorem* 'is a former major'

Table 6. *Polish sememic redundancies.*

Paczka papierosów podrożeje ***średnio o około*** *trzydieści groszy* 'a pack of cigarettes will become more expensive by **an average price of exactly about** 30 groszy' could be analyzed as a blend of two approximated extent expressions, but the result, when decoded, is clearly redundant.

[6] At least, this is redundant if husband and wife are about the same age.

*Jej **się brechtać śmieje*** ‘she laughs a laugh’ could also be analyzed as a blend of two predications involving laughter, one personal (with *ona* as its subject) and one impersonal (with no subject and dative *jej*). *Brechtać się* is considered dialectal or non-standard, but it does mean to laugh. Thus again, the result, when decoded, is clearly redundant. Finally, *ten gość był byłym majorem* ‘that guest was a former major’, is also a candidate for a blend of two predications with a redundant result: *that guest was a major* [7] and *that guest is a former major*. We analyze all of these as sememic redundancies, because in each case the expression observed results from two complete predications.

This completes the redundancies that require appeal to the linguistic system to analyze. We turn now to expressions that are inherently redundant semantically.

4.4. COGNITIVE REDUNDANCIES. Some of the examples observed are expressions that are structurally unremarkable but are inherently redundant from a semantic point of view. They might be said to be the opposite of oxymoronic expressions, with parts which are semantically contradictory but structurally unremarkable, e.g., *monogamous polygamist* or *stara panna młoda* ‘old bride’, where *panna młoda* is idiomatically ‘bride’ but lexically ‘young maiden’. We have gathered oral and written examples in both English and Polish and provide a selection of illustrative samples here.

In English we find written on a pre-cooked pudding package: *product will be hot after heating*. The information is clearly redundant, though it may have resulted from a frivolous lawsuit. The host on a call-in radio show said, “Elaine, you’re on the phone.” In a weather report the news reader said, “After yesterday’s *snow and blizzard* ...” Another news reader said that astronauts were “working on a *space station spacewalk*,” and a politician said, “We are at *a critical juncture and a crossroads*.” While many examples are inherently redundant, in many cases it seems that someone is trying to add an explanatory or clarifiying expression to something already said and succeeds only in producing a synonymous word or phrase.

Both types can be seen in our Polish examples. *Mokra woda* ‘wet water’ and *mokre opady* ‘wet precipitation’ need no explanation. *Stary dziad* ‘old ancestor’ prompts the question, is there such a thing as a young ancestor, though *stary dziad* is not redundant if *dziad* is taken in the sense of *żebrak* ‘beggar’ or ‘old man’ (Bacz, pc). Similar examples can be seen in *okres czasu* and *spadać w dół*. *Okres* is a period of time and *czas* is time, so *okres czasu* means ‘a period of time of time’. *Spadać* means to fall down and *w dół* is a goal expression communicating movement in a downward direction, so *spadać w dół* means ‘fall down down’. A sign in a bakery advertised *jabłońki* (sic) *z jabłkiem*. *Jabłonki* are apple-filled pastries, so called because they are filled with *jabłko* ‘apple’. So the sign was promoting apple-filled pastries with apple.[8]

Synonymous explanations (that don’t really explain) are seen in *uzyskał ten awans **tylko i wyłącznie** dzięki pracy* ‘He earned this promotion **only and exclusively** thanks to his work’, though such redundant doublets are common in lawyerese.

We also have a classic example combining repetition and redundancy: *the back of the backside of the back seat could be pushed forward*. It could hardly be pushed backward.

5. DISCUSSION. As mentioned in section 2.3, redundancies differ from other speech errors considered in our series of studies. They do not appear to require spreading activation or random

[7] And no longer is, the implied full meaning of *był* + instrumental.

[8] WJS, a regular customer at this bakery and well known to the staff, said *Proszę o jabłonki z jabłkiem* “Apple pastries with apples, please.” Nobody could keep a straight face.

rest periods or the assumption of stratum-by-stratum sequencing of emes, though they are compatible with all of these. Like the other types of speech errors, they provide indications of a cognitive store and three linguistic strata: semology, syntax, and morphology. Unlike them, there are no redundancies on the phonemic and hypophonemic strata, though there is no indication that such redundancies are impossible.

A major difference between redundancies and other types of speech errors is that redundancies never result in misunderstanding or gibberish. They may be stylistic errors and may contribute to wordiness without improving understanding, but they are not errors in any other sense.

At this point we would like to propose a hypothesis. Suppose input from cognition to the linguistic system is stronger or continues for a longer period than necessary, producing a kind of semantic overload. That is, the semantics sends a signal to the linguistic system to communicate something (predication, phrase, aspect) but overdoes it in either time or strength of signal. The linguistic system then responds by encoding the overloaded eme(s) twice. It is also possible that the added input comes from doubled input, once at the normal place for encoding, i.e., the top of the sememic stratum, and once via the horizontal arrows at the sides of **Figure 1**. If this is true, it permits a further speculation, that there should be phonemic and hypophonemic redundancies. Phonemic redundancies would most likely be prosodic in nature. That is, they would take the form of extended vowel sounds (b-o-o-o-**ring**) with marked word accent on the second syllable, in this case. Hypophonemic redundancies might take the form of an extension of a manner articulation, though how we would distinguish this from a stammer in a particular case is unclear.

6. CONCLUSION. Our previous work buttresses a model that we communicate via spreading activation through a stratified network, that the activation may be interrupted on one stratum or another at random intervals, and that each stratum provides sequencing for materials not sequenced on higher strata. It is now possible to summarize the findings of the present study in relation to the questions concerning redundancies raised in section 2.3.

Our initial observation that redundancies do not require spreading activation, random rest periods, or sequencing of materials unsequenced at higher strata may need modification, if the possible overlap between redundancies and perseveration (a timing error) or unintended blends is broader than we now think. Yet our observation that redundancies are compatible with these assumptions now seems to be on firm ground. At the least, redundancies reify some previous findings and assumptions and are fully compatible with the rest.

Our next question involves the difference, if any, between redundancy and simple repetition. At first glance, we take simple repetition at face value. That is, identical forms with identical meanings must be observed. Our clear redundancies show a repetition of meaning by the use of differing forms. We need to go into this question in greater depth in further studies.

More broadly, what is the interplay between semantics and form in deciding whether something is a redundancy or a repetition, a redundancy or a blend? An account of the interplay goes well beyond our present scope. We note only that a hard and fast decision here is quite likely to be neurocognitively questionable. It may only become possible to answer when direct brain observation studies have advanced far beyond their present state.

In the end, redundancies at least reify a portion of our previous findings, but their overall significance in the system and the use of the system is still unclear. It is also possible that they are related to unintended puns (cf. Reich 1984), accidental jokes and other humor, as well as Freudian slips, which are also non-erroneous performance phenomena. We suspect that functional OR

relations in the system provide the potential needed for an explanation here. The work continues.

REFERENCES

BACZ, BARBARA. 1992. Towards the meaning of the nominative in Polish. *LACUS forum XIX.*256-63.

REICH, PETER A. 1984. Unintended puns. *LACUS forum XI*.314-22.

SULLIVAN, WILLIAM J. 2011. Input, output, and (de)linearization: What we owe to Sydney M. Lamb. *LACUS forum XXXVI.*279-89.

---, & SARAH TSIANG. In press. Tactic pattern errors and the architecture of stratificational theory. To appear in *LACUS forum XXXVII.*

TSIANG, SARAH, & WILLIAM J. SULLIVAN. In press. Unintended blends and the stratification of language. To appear in *LACUS forum XXXVIII.*

This article was first published at www.lacussquare.org.

LACUS FORUM

Journal of the Linguistic Association of Canada and the United States

VOLUME 39 NUMBER 2, 2025

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LACUS Forum 39:2.1-13 (2025)

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INCHOATIVE PREFIXATION IN POLISH: za- AND s- / z-

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Abstract: Polish *za-* and *s-/z-* inchoatives, i.e. verbs that denote "the beginning of an activity, state or process" (***za***grać^{p} 'begin to play'; ***z***rozumieć^{p} 'come to understand'; ***za***chorować^{p} 'fall sick'; ***z***głodnieć^{p} 'get hungry') are examined in the light of the Slavic Cognitive Linguistic descriptions of this class of prefixed perfectives. In the cluster model for Russian these verbs are classified as ingressive Complex Act Perfectives based on Incompletable imperfectives (*zaprygat*' 'begin to hop' < *prygat*' 'hop') or as inchoative Natural Perfectives derived from Completable imperfectives (*okrepnut*' 'become strong' < *krepnut*' 'grow stronger'). In Polish, however, the cluster model description of *za-* and *s-/z-* inchoatives needs to be more complex, for many Polish *za*-perfectives are ambiguous between ingressive (CAP) and resultative (NP) readings (***za***śpiewać 'start singing' or 'finish singing [something]') while the corresponding Russian *za*-perfectives are unambiguously ingressive (***za***pet' 'start singing'). Dickey claims that *s*-prefixation in Russian represents an eastern aspectual characteristic, different from the western, Czech-like pattern. I argue that the inchoative *s-/z-* prefixation in Polish, which is more productive than *s-* prefixation in Russian, closely resembles the *s-/z-* prefixation in Czech (Polish ***z***denerwować się 'become nervous', Czech ***z***nervóznět vs. Russian *stat' nervnym*). According to the *s-/-nu-* Allomorphy Hypothesis of Dickey and Janda, certain *s*-prefixed perfectives in Russian (***s***glupit', ***s***xitrit') are not inchoatives but semelfactive Single Acts. The corresponding Polish *s-/z-* perfectives (*zgłupieć, stchórzyć*, *ześwinić się*) are also Single Acts in appropriate contexts, but the group includes non-*s*-prefixed verbs as well (***za***szaleć, ***o***szaleć, ***wy***głupić się) so the Allomorphy Hypothesis does not apply to Polish.

Keywords: prefixation, inchoatives, ingressives, semelfactives, cluster model of aspect, (in)completability, East-West Hypothesis, Allomorphy Hypothesis
Languages: Polish, Russian, Czech, Old Bulgarian

PREFIXATION AFFECTS BOTH THE GRAMMATICAL AND THE LEXICAL STATUS of the verb in Slavic. In addition to changing the verb's aspect from Imperfective to Perfective, perfectivizing prefixes[1]

[1] Prototypically, prefixation results in the verb's perfectivization (*robić*^{i} > ***z***robić^{p}), but prefix addition does not have to cause an aspectual change. Some *s-/z-* and *za-* prefixed verbs remain imperfective after prefixation: *chodzić*^{i}

modify the verb's lexical meaning by bringing to the fore the result of an activity (***z***budować 'get built' [aspectual s-/*z*-]); the manner in which it is completed (***z***wiązać 'tie, join together' [centripetal *s-/z*-], ***po***zamykać 'close up several things' [distributive *po*-]); or the way it relates to time (***po***siedzieć 'sit for a while' [delimitative *po*-], ***prze***siedzieć 'sit through' [perdurative *prze*-], ***za***ćwierkać 'start chirping' [inchoative *za*-], ***s***tchórzyć 'act as a coward' [semelfactive *s-/z*-] (Bacz 2007a, 2007b, 2012). Depending on the semantic effect produced in a given use, and the classification opted for by an author, Polish verbal prefixes have been described as resultative, perdurative, delimitative, distributive, inchoative, etc. (Grzegorczykowa et al. 1984, Śmiech 1986, Janowska & Pastuchowa 2005, Łaziński 2008)[2]. This paper investigates two perfectivizing prefixes, *s-/z*- and *za*-, which relate the activity expressed by the verb's lexical base to time by focusing on "the beginning of an action, state, or process" (*On-line SJP PWN*). In the Polish literature on prefixation this temporal meaning has been named "inchoative" (from Latin *inhoare* 'begin'), and prefixed verbs expressing the beginning of a verbal event have been referred to as "inchoative verbs" (*czasowniki inchoatywne, inchoatywa*).

Polish studies on verbal prefixation (Słoński 1937, Grzegorczykowa et al. 1984, Śmiech 1986, Janowska & Pastuchowa 2005) employ the term inchoative interchangeably with the term ingressive (from Latin *ingressus* 'entered in, entry') when referring to verbs indicating the beginning of an event/situation expressed by the verb (*inchoativum*). Polish dictionary definitions of *inchoativa* also treat the adjectives for inchoative and ingressive as synonyms (*SJP PWN, SWO*). The inchoative/ingressive overlap in Polish terminology is a continuation of the tradition in Slavic aspectology where the two terms are used interchangeably (Łaziński 2008, footnote 8)[3].

I am following the practice of Polish linguists and grammarians, and I use the term inchoative

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'walk' > ***s***chodzić^{i} [z drabiny] 'walk down [the ladder]'; *jadać* ^{i} 'eat from time to time' > ***za***jadać ^{i} 'eat heartily' ; *siadać*^{i} 'sit' > ***za***siadać^{i} 'sit down in order to eat and discuss [formal]', etc. The situation of prefixed verbs is more complex (e.g. prefixed imperfectives can derive from prefixed perfectives by suffixation, as in: *zaszyć*^{p} > *zaszywać*^{i} 'sew up'), but for the argument at hand it is sufficient to observe that verbal prefixes are not always perfectivizing.

[2] In their classifications of verbal prefixes, different authors describe the inchoative meaning of a prefix in different ways. E.g. Słoński (1937: 5) uses the adjective *ingresywny* only once: to define the meaning of the prefix *vъz*- denoting the beginning of an activity in Old Bulgarian verbs like *vъzbuditi* (with its modern Polish development *wzbudzić* [gniew, żal (za grzechy)] 'stir, cause (a feeling of), begin to manifest [anger, sorrow]'; Grzegorczykowa et al. (1984: 479) use the term inchoative formations (*formacje inchoatywne, inchoatywa*), Janowska & Pastuchowa (2005) talk about inchoative meaning of a prefix (*znaczenie inchoatywne prefiksa*) while Śmiech (1986) avoids the qualifier inchoative altogether and defines inchoative verbs descriptively as "verbs with the prefix *za*- denoting the beginning of an action" (4.4, p.39) or "verbs with the prefix *z(e)*- that express a factitive meaning" (the meaning of "zrobić tym lub takim jak podstawa słowotwórcza" – 3.4, p. 31).

[3] In his own description of the prefix *za*-, however, Łaziński (2008, fn. 15) applies the term ingressive to verbs imparting the sense of the beginning of the action (*zachorować* 'get sick'*, zamieszkać* 'start living somewhere, inhabit'), while restricting the adjective inchoative to verbs denoting transition to a new state (no example provided). Doroszewski (*On-line SJP*) defines the term *ingresywny* as "focusing on the initial moments of an activity" (*uwydatniający początkowe momenty czynności*) and quotes the verb *rozpłakał się* 'started crying' as an example of ingressive use (my translation).

A discussion of the difference between ingressiveness and inchoativity from the perspective of formal semantics illustrated by the prefixed-verb material from Ukrainian and Polish can be found in the on-line paper by Natalia Kotsyba: *Ingresywność i inchoatywność jako początkowe rodzaje czynności a kwantyfikacja predykatów w zdaniu (na przykładzie języka ukraińskiego)* at domeczek.pl/~natko/papers/ingr_inch_SK08.doc (Accessed on July 21, 2012).

with reference to all prefixed verbs that focus on the beginning of the evoked activity (*zagrać* 'start playing', *zagotować się* 'start boiling'), state (*znienawidzieć* 'start hating', *zachorować* 'fall sick') or process (*zmądrzeć* 'become wise' < *mądrzeć* 'grow wise'). Thus, the term inchoative in this paper includes verbs that are called ingressive in the studies by Slavic cognitive linguists (Janda 2007, 2011; Makarova & Janda 2009; Dickey & Janda 2009) and verbs that are referred to as inchoative (Dickey 2000, 2005).

My aim is to apply to Polish some recent findings in SCL research on prefixation and aspect. The specific objectives are a) to establish to what extent the cluster-model treatment of ingressive and inchoative perfectives proposed for Russian (Janda 2007, 2011) can be helpful in developing a comprehensive description of inchoative prefixation in Polish; b) to evaluate Polish *s-/z-* inchoative data from the perspective of the aspectual East-West hypothesis (Dickey 2000, 2005); c) to consider the *-nu-/s-* Allomorphy Hypothesis for Russian (Dickey & Janda 2009) in the light of Polish 'become like/act once like' inchoatives.

1. INCHOATIVES VERSUS INGRESSIVES IN SCL RESEARCH. In the work of SCL linguists, ingressives and inchoatives are considered as separate verb types. Ingressives are prefixed perfectives that denote the beginning of an action or activity and are included in the category of Complex Acts (CAP's) in the cluster model of aspect (Janda 2007, 2011), such as Russian *zaprygat'* 'start hopping' (Janda 2011: 6) or Polish *zapłakać* 'start crying'. Inchoatives are deadjectival and denominal prefixed perfectives, paraphrasable by the '*become (stać się)* + Adj' structure, whose lexical bases denote a change of state, such as Russian *oslepnut'* 'become blind' < *slepnut'* 'grow blind' (Dickey 2000: 9-10) or Polish *zgłodnieć* 'become hungry'< *głodnieć* 'get more and more hungry'.

In the cluster model of aspect, proposed for Russian by Janda (2007) and expanded in Makarova & Janda (2009), ingressive perfectives (*zaprygat'* 'start hopping') are included in the category of Complex Act Perfectives (CAP's). Janda (2011) provides a semantic characteristic of ingressive CAP's in Russian relying on the concepts of Completability (of the corresponding imperfective) and action quantification (of the perfective ingressive). Accordingly, ingressive perfectives: a) focus on starting an activity; b) come from strongly Non-Completable imperfectives (which entail neither progress nor result); c) quantize engagement in an action that lacks goal-directedness.[4] Polish examples with these characteristics are represented by verbs such as *zapłakać* 'start crying' or *zagrać* 'start playing'.

Inchoative perfectives (*okrepnut*^{p} 'become strong' < *krepnut*^{i} 'get stronger and stronger') are included in the cluster category of Natural Perfectives (NP's). They are characterized as verbs that come from strongly Completable imperfectives (which entail progress in 'becoming something') and express the beginning of a new state (Janda 2011). In addition, they are defined morphologically, as deadjectival (or denominal) derivatives, and syntactically, as verbs that can be paraphrased by '*become*^{p} *(stać się)* + Adj' structures. Dickey's (2000) typical example of an inchoative is the Russian perfective *oslepnut'* 'become blind' < *slepnut'*^{i} 'grow blind'. *S-/ z-* inchoatives in Polish with the corresponding characteristics are the deadjectival derivatives:

[4] In her definition of Complex Act Perfectives, Janda (2011: 6) employs the verb "quantize" ("cut out a piece of something unquantifiable" - *On-line Dictionary of English*): "CAP's quantize engagement in an action that lacks goal-directedness" by "set[ting] boundaries on an action". Janda's (2011) interpretation of quantizing refers to the temporal functions of *ingressives* (starting an activity), *terminatives* (stopping an activity) and *delimitatives* and *perduratives* (engaging in an activity for a while).

s*twardnieć* [from the adjective *twardy*] 'become^{p} hard' < *twardnieć*^{i} 'grow harder and harder'; ***z****głodnieć* [from the adjective *głodny*] 'become^{p} hungry'< *głodnieć*^{i} 'get more and more hungry'; ***z****marnieć*^{p} [from the adjective *marny*] 'become weak and poor' < *marnieć*^{i} 'grow weaker and weaker'.

1.1. *S-/Z-* INCHOATIVES AND THE EAST-WEST HYPOTHESIS. Dickey (2005: 42) argues that the productive ability of a Slavic language to derive abstract change-of-state verbs, such as the *s-/z-* prefixed inchoatives, testifies to this language's aspectually western status. His evidence is the *s-/z-* inchoatives in Czech, such as ***ze****všednět* 'become daily/quotidian' (derived from the adjective *vsědni* 'daily') or ***z****nervóznět* 'become nervous' (from the loan adjective *nervózni* 'nervous'). These inchoatives have no morphological equivalents in Russian, a typically eastern language in the East-West aspectual classification of Slavic, and have to be rendered periphrastically by *stat' obydennym*, *stat' nervnym* (Dickey 2005: 42). Polish does have the corresponding *s-/z-* inchoatives ***s****powszednieć*^{p} 'lose attractiveness, become daily currency' (derived from the adjective *powszedni* 'daily') and ***z****denerwować się*^{p} 'become nervous' (derived from the adjective *nerwowy* 'nervous'). It also has the *s-/z-* prefixed deadjectival factitives that belong to the same derivational category as the Czech and Slovak examples quoted by Dickey such as the equivalents of *udostępnić* 'make accessible [*dostępny*]'; *rozwodnić* 'dilute, make more watery [*wodnisty*]', etc.[5] Thus, on the basis of this evidence, it can be argued that in terms of the productive *s-/z-* prefixation Polish is closer to Czech and Slovak than to Russian.[6]

2. DATA ANALYSIS. Inchoative meaning is expressed by at least ten Polish prefixes, in alphabetical order: *nad-, o-, po-, prze-, roz-, s-/z, -u-, wz-, wy- za-*. The prefixed verbs in (1) can all be said to communicate some form of inchoativity and their prefixes have been attributed inchoative meaning by different Polish authors.[7]

(1)	nad-	*nadgnić* (*nad*-rot) 'start rotting'	< *gnić* 'rot'
	o-	*ozdrowieć* (*o*-get better) 'get cured'	< *zdrowieć* 'grow healthy'
	po-	*pokochać* (*po*-love) 'start loving'	< *kochać* 'love'
	prze-	*przemówić* (*prze*-speak) 'start speaking'	< *mówić* 'speak'

[5] Most of the Polish equivalents of the Czech and Slovak *s-/z-* examples classified by Dickey as deadjectival inchoatives (2005:39, 42) are placed in the category of pure perfectives by Śmiech (1986: 34), who lists the perfectives ***z****mądrzeć* 'become wise', ***z****miękнąć* 'become soft', ***s****chudnąć* 'become thin', ***s****kwaśnieć* 'become sour', etc. together with ***z****rozumieć* 'come to understand'. It is not clear why Śmiech sees these deadjectival *s-/z-* formations as examples of purely aspectual prefixation while verbs such as ***ze****schnąć się* 'become dry' are included in a separate 'become + Adj' category (3.4.2 , p.32).

[6] See Bacz (2007a) for more evidence putting into question Dickey's (2000, 2005) classification of Polish with the eastern languages in the East-West aspectual division of Slavic.

[7] The Polish ***po-*** (as in *pokochać* 'start loving') and ***u-*** (as in *uwierzyć* 'start believing') are considered inchoative by Grzegorczykowa et al. (1984:475) and Bartnicka & Satkiewicz (2000) but are viewed as purely aspectual by Śmiech (1986: 89); ***wz-*** (as in *wzbudzić, wzniecić* 'ignite') is the only prefix Słoński (1937) qualifies as ingressive; ***roz-*** (as in *rozpłakać się* 'start crying') and ***o-*** (as in *ochrypnąć* 'become hoarse [about voice]', *ozdrowieć* 'regain health [after a serious illness]' are inchoative for Bartnicka & Satkiewicz (2000), but purely aspectual for Śmiech (1986: 85); ***wy-*** (as in ***wy****zdrowieć* 'regain health', **wy**głodnieć 'become hungry') and ***nad-*** (as in ***nad****łamać się* 'start breaking [about a branch]', ***nad****gnić* 'start rotting') focus on the initial moments of an activity or process according to Bartnicka & Satkiewicz (2000); ***s-/z-*** (in ***s****podobać się* 'get/ come to be liked, ***z****martwić się* 'start worrying') and ***za-*** (in ***za****chcieć* (*się*) 'begin to want', ***za****pragnąć* 'begin to desire, develop a desire for something') have expressed inchoativity ever since Old Polish according to the study by Janowska & Pastuchowa (2005: 197).

roz-	*rozchorować się* (*roz*-be sick) 'get sick'	< *chorować* 'be sick'
s-/z-	*zrozumieć* (*z*-understand) 'get to understand'	< *rozumieć* 'understand'
za-	*zachorować* (*za*-be sick) 'fall sick'	< *chorować* 'be sick'
u-	*uwierzyć* (*u*-believe) 'start believing'	< *wierzyć* 'believe'
wz-	*wzbudzić* (*wz*-wake) 'stir up, make awake'	< *budzić* 'wake up'
wy-	*wyzdrowieć* (*wy*-get better)'become healthy'	< *zdrowieć* 'grow healthy'

2.1. THE INCHOATIVE *ZA-*. Among the prefixes that put the initial stages of the verb's activity in focus, the inchoative function of the prefix *za-* is the least controversial. The inchoative *za-* is well documented in Old Polish (Janowska and Pastuchowa 2005: 178)[8] and is recognized by authors investigating contemporary usage. Śmiech (1986: 39) underlines the importance of the inchoative function of the prefix *za-* by pointing to its motivational role in the formation of a whole separate category of Polish *za*-derivatives. Łaziński (2008: 9) observes that the prefix *za-* is very productive in contemporary Polish and produces the effect of inchoative meaning in the highest number of its derivatives.

Some interesting recent *za*-derivatives with inchoative meaning quoted in Łaziński's paper are *zawalczyć* 'engage in a fight', *zamailować* 'get in touch by e-mail', *zaeksperymentować* 'experiment with something for the first time', *zainicjować* 'initiate something'. In contrast to prototypical inchoatives, such as *zamieszkać* 'start living somewhere' or *zakwitnąć* 'start blooming', these new *za*-perfectives do not explicitly point to the temporal beginning of an activity denoted by the verb. The difference is illustrated by the sentences from the *PELCRA NKJP* with the verbs *zawalczyć* versus *zamieszkać* in (2):

(2). a. *Chcieli, żeby film Wajdy* ***zawalczył*** *w konkursie*.
'They wanted Wajda's film to za-fight (enter) in the competition.'
They wanted Wajda's film to get into (not: to begin) the competition.

b. *Odszedł na emeryturę i* ***zamieszkał*** *w Poznaniu*.
'He retired and za-lived (started living) in Poznań.'
He retired and moved to Poznań.

While the prefix *za-* in *zamieszkać* '*za*-live' refers to the initial moments of living in a new place, in *zawalczyć* '*za*-fight', it suggests involvement in the activity of competing, not the beginning stages of the actual competition. This semantic effect follows from the fact that the inchoative sense is only one element in the combination of meanings conveyed by the prefix.

The new *za*-derivatives originate in spoken Polish (Łaziński 2008: 12): while the expression *zawalczyć o medal* '*za*-fight for a medal' is very common in sports commentaries (*Radwańska zawalczy o medal na olimpiadzie* 'Radwańska will *za*-fight for a medal at the Olympics'[9]), it would

[8] "The inchoative function of the prefix *za-* is well documented in the oldest Polish material" (Janowska & Pastuchowa 2005: 178 – my translation). An interesting extinct OP example is the verb ***za****jeść* 'start eating, bite a bit' whose inchoative meaning in *Mięso co dziki zwierz zaje (...) tego nie jeść* 'The meat that a wild beast *za*-eats (…) that should not be eaten' "raises no doubt", according to the authors (Janowska & Pastuchowa 2005: 177).

[9] As a speaker of Polish who lives abroad, I am unpleasantly struck by the increasingly common use on *TV Polonia* of the prefix *po-* in perfectives with an element of inchoativity. Rather than *zawalczyć (o medal)*, sports commentators often say *powalczyć (o medal)*. Since the *po-* perfective *popadać* '*po*-rain', where the prefix is clearly delimitative, also appears to be on the increase (*Jutro popada w południowej Polsce* 'It will *po*-rain in southern Poland tomorrow' rather than *Jutro będzie padać* 'Tomorrow it will rain'), it might be that the sense of "a little bit" is competing with the sense of inchoativity in the expression *powalczyć* : *zawalczyć o medal*. That interpretation would agree with the impression of temporariness conveyed by new *za-* derivatives noted by Łaziński (2008).

not be possible to use the *za*-derivative when referring to someone's participation in a battle or when talking about the war experience. The traditional periphrastic expressions *podjąć / stoczyć walkę* 'engage in a fight/ fight a battle'; *wziąć udział w walce/ przystąpić do Powstania* 'take part in a battle/ join the Rising' have to be used in formal contexts such as *Żołnierze stoczyli walkę* [**zawalczyli*] *o Westerplatte* 'The soldiers fought in the Battle of Westerplatte'; *Postanowił przystąpić do Powstania* [**zawalczyć w Powstaniu*] 'He decided to join the Rising.'

2.1.1. *ZA*-INCHOATIVE DOUBLETS. With its numerous meanings,[10] the prefix *za-* is extremely versatile and therefore very productive in contemporary Polish. As it encroaches on the meaning of many other prefixes, some authors have suggested that the inchoative *za*-derivatives have non-*za*- 'synonyms' (Bartnicka & Satkiewicz 2000: 273). The prefixed verb pairs in (3) have been called 'semantic doublets' (Janowska & Pastuchowa 2005) because their inchoative *za*-perfectives can be substituted by the corresponding non-*za* perfectives in some contexts:

(3) ***zak****witnąć* (*za*-bloom) 'start blooming' = ***roz****kwitnąć*
za*śmiać się* (*za*-laugh) 'start laughing' = ***roz****eśmiać się*
za*milknąć* (*za*-be silent) 'become quiet' = ***u****milknąć*
za*chrypnąć* (*za*-sound hoarse) 'start sounding hoarse' = ***o****chrypnąć*
za*decydować* (*za*-decide) 'become decided' = ***z****decydować*

- *Tulipany **za/roz**kwitły w zeszłym tygodniu*
  'Tulips started blooming [came to bloom] last week.'
- ***Za/O****chrypł od tego śpiewania.*
  'He lost his voice [His voice became hoarse] from all that singing.'
- ***Za/Roz****eśmiał się na widok Pierrota.*
  'He smiled [began to smile] at the sight of Pierrot.'

The meanings of *za*-prefixed inchoatives and their non-*za* equivalents cannot be identical, because each prefix has a different semantic network with different elements brought to the fore. For example, *rozkwitnąć* and *roześmiać się* are more intense than their *za*-equivalents because of the 'spread' sense of the prefix *roz-*; ***u****milknąć* is more formal than ***za****milknąć* because *u-* forms are generally more archaic than their non-*u* equivalents;[11] *o-* in ***o****chrypnąć* adds the sense of 'all over, around' not present in ***za****chrypnąć*; ***za****decydować* is longer and therefore more emphatic than ***z****decydować*. The sense of inchoativity, however, is shared by both of the prefixed derivatives, which allows for the substitution of one prefixed derivative by the other in certain contexts.

2.1.2. DOUBLE MEANING OF *ZA*-INCHOATIVES. Even though the inchoativity of the prefix *za-*, unlike that of the other prefixes with inchoative meaning, raises no objections among Polish grammarians and linguists, there is no agreement as to which of the *za*-prefixed verbs are truly inchoative. Both the academic grammar of Polish (Grzegorczykowa et al. 1984: 475) and the study by Śmiech (1986: 39) agree on only three examples of *za*-inchoatives: *zachorować* '*za*-be sick, fall

[10] Łaziński (2008: 9) distinguishes 8 specific meanings of *za-* in addition to its purely aspectual function. See also Tabakowska's (2003: 172) semantic network of *za-* with its 8 meaning slots.

[11] Janowska & Pastuchowa (2005: 124) observe that with time the *u*-forms have disappeared from many Polish doublets, e.g. Old Polish ***u****tłumić/* ***s****tłumić* > Modern Polish ***s****tłumić* 'put down'; OP ***u****jednać/****po****jednać* > Modern Polish ***po****jednać* 'reconcile'.

sick', *zamieszkać* '*za*-inhabit, start living somewhere', *zapachnieć* '*za*-smell, start smelling'. The other *za*-verbs: *zaboleć* '*za*-hurt, start hurting', *zakwitnąć* '*za*-bloom, start blooming', *zasmucić się* '*za*-be sad, become sad', and many more, which are listed as examples of pure inchoatives by Grzegorczykowa, are considered aspectual perfectives by Śmiech. This lack of agreement in the classification of the *za*-prefixed derivatives follows from the possibility of a double interpretation of the inchoative *za-* in Polish. In many *za*-prefixed derivatives, the inchoative meaning combines with the meaning of completion and one-time occurrence (completed engagement in an activity). This accumulation of meanings leads to hesitation in the semantic interpretation of *za-* examples by native speakers of Polish[12] and explains, for example, why the Polish *za-* derivative *zaśpiewać* appears less inchoative (less ingressive) than its Russian counterpart *zapet*', which is always interpreted as 'begin to sing'.[13]

Łaziński (2008:14) suggests that Russian admits of the inchoative *za-* prefixation more freely than Polish. For instance, where Russian has ***za**govorit'* 'start talking', Polish needs a periphrastic expression *zacząć mówić* 'start talking' or a derivative with *prze-, **prze**mówić* 'start talking after a period of silence'[14]. To indicate the beginning of a rotting process Russian uses the prefix *za-* with the verb *gnit'*, but Polish prefers the prefix *nad-* (Russian: ***za**gnit'* 'start rotting', Polish ***nad**gnić* 'start rotting, rot a little').

The pairs of sentences in (4) and (5), with *zaśpiewać* '*za*-sing' and *zagrać* '*za*-play', show that depending on the context, these *za*-perfectives in Polish can have either the inchoative or the perfectivizing, single-occurrence interpretation:

(4) a. *Ktoś **zaśpiewał**, a inni podchwycili* (PELCRA NKJP)
'Somebody ***za*-sang** (= **started singing**) and others joined in.'
b. *Zakonnik **zaśpiewał** poloneza Ogińskiego*. (PELCRA NKJP)
'The monk **za-sang (= sang, performed)** the polonaise by Ogiński.'

(5) a. *Orkiestra **zagrała** i wszyscy ruszyli do tańca*. (Śmiech 1986:40)
'The band **za-played (started playing)** and all people got up to dance.'
b. *Stańko **zagrał** na pogrzebach trzech ludzi*. (PELCRA NKJP)
'Stańko ***za*-played (played, performed)** at the funerals of three people.'

Since the *za*-verbs such as *zagrać, zaśpiewać* (examples (4) and (5)) can indicate both the beginning and the completion of an activity, in the cluster model of Polish these *za*-inchoatives would have to be assigned to two types of perfectives: the non-Completable, ingressive CAP and the Completable NP. Another solution would be to treat these verbs as CAP/NP homonyms.

2.1.3. PURE *ZA*-INCHOATIVES IN CONTEXT. The academic grammar of Polish (Grzegorczykowa et al. 1984: 475) classifies the verbs *zamieszkać, zakwitnąć* as examples of "pure inchoatives" (*czyste*

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[12] Dickey (2000: 227) comments on that hesitation in the native informants' interpretation of his example (47): *Gdzieś pod lasem **zaterkotały** karabiny maszynowe* 'Somewhere near the forest, machine guns started chattering/chattered' which can refer to the beginning of continuing action or a short burst. In fact, Tabakowska's (2003: 173) example of inchoative *zaśpiewać*: *Mój kanarek **zaśpiewał** pierwszy raz od tygodnia*, which she translates 'My canary has begun singing for the first time in a week', is to me ambiguous. The verb *zaśpiewał* in the context of the sentence can easily be interpreted as a one-time completed activity of singing translated as *sang.*

[13] Russian uses the prefix *s-* to denote one-time completion of the activity of singing: *spet*' 'sing to the end'.

[14] The Polish verb ***za**mówić* [*za-* talk] means 'to book'. However, Polish has a negative *za-* inchoative ***za**niemówić* [*za-* not talk] 'begin not to talk, fall silent [because of a strong emotion]' (cf. ***za**milknąć* 'start being quiet, stop talking').

inchoatywy). In a narrative context, however, even these verbs can be interpreted as inchoative or as perfectives denoting single occurrence, especially when they relate events completed in the past:

(6) a. *W końcu kwietnia* ***zakwitły*** *tulipany*. (PELCRA NKJP)
'Tulips ***za*-bloomed (started blooming)** at the end of April.'
b. *W końcu kwietnia* ***zakwitły*** *tulipany, w czerwcu* ***zakwitły*** *kasztany*.
'Tulips ***za*-bloomed (bloomed)** at the end of April, chestnut trees **bloomed** in June.'

In example (6)a, with '*za*-bloom', the verb is likely to refer to the initial phase of blooming (though it may also mean a completed event in the past that took place in April); in (6)b, the impression of perfective completion is stronger because of the succession of the two events in the past.[15]

(7) a. ***Zamieszkał*** *w Genewie i tam umarł*. (PELCRA NKJP)
'He ***za*-lived** in (moved to) Geneva and there he died.'
b. *Franker* ***zamieszkał*** *tu jako student sublocator. Mieszka do dziś.* (PELCRA)
'Franker **za-lived (came to live)** here as a rent-paying student. He has been living here to this day.'

In (7)a, the verb *zamieszkał* means 'moved to a new location'. Even though the act of moving indicates the beginning of a new situation (change to a new location) and in that sense, the verb can be interpreted as inchoative, the subsequent event in the narrative (dying) implies a complete view of the activity/state of living in Geneva. Living in Geneva is seen as one event in a series of events completed in the subject's life. The unprefixed imperfective *mieszkać* 'to live' has a non-Completable construal (no progress and no result entailed); the prefix *za-* provides a boundary (starting point) to the activity expressed by the verb (living in Geneva); the context, i.e. the subsequent event in the narrative, supplies the activity with an end point (i.e. it indicates that the activity of living in Geneva has ended). In *zamieszkać* the sense of totality and completion does not follow directly from the meaning of *za-* as it would in Complex Act terminatives, such as *zajechać* 'arrive at a place' (***Za****jechał na miejsce po długiej podróży* 'He *za*-arrived at his destination after a long journey'). It is due to the verb's perfectivity achieved by means of *za-*prefixation and brought to the fore in the narrative context. In (7)b, no subsequent past-tense event follows the activity of Franker's moving into a new place, so the inchoative meaning of the verb *zamieszkać* is not overrun by the narrative context.

Whether the natural end of a situation denoted by the *za*-inchoative is implied by a unitary direct object (as in [4]b), an adverbial ([5]b) or the narrative context ([6]b), ([7]a), it is clear that talking about pure inchoatives is an idealistic assessment of a prefixed verb's meaning. It can be said that the prefix *za-* steers the perception of an activity toward its beginning, but the inchoative sense is practically always combined with some other meanings, especially, the meaning of a natural, single-occurrence completion.[16]

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[15] Strictly speaking, it is also possible to interpret (6)b as relating two completed initial phases of blooming that happened in succession: 'began to bloom in April, began to bloom in June'.

[16] The meaning of completed one-time occurrence follows from the verb's perfectivity and is therefore present in the whole variety of perfectivizing prefixes (***po****gratulować* 'congratulate on one occasion', ***roz****bić* 'break on one occasion', ***za****tańczyć* 'dance on one occasion', ***u****gryźć* 'bite once', etc.). Łaziński (2008: 9) calls this meaning of inchoative *za-* derivatives "the single-occurrence segmenting/quantizing (?) meaning" (*znaczenie jednokrotne segmentujące*) which "in addition to focusing on the beginning of the action, cuts out a typical segment (quantum) of the activity" (my

2.1.4. *ZA*-INCHOATIVES AND SEMELFACTIVITY. The impression of punctual, one-time occurrence is particularly strong in *za*-inchoatives denoting short-lasting acoustic and visual events and phenomena, such as *zabeczeć* '*za*-bleat', *zaklaskać* '*za*-clap', *zaćwierkać* '*za*-chirp', *zagrzmieć* '*za*-thunder', *zadrgać* 'za-tremble'. It is often observed that these inchoatives are semantically very close to *–ną-* suffixed semelfactives (*beknąć* 'bleat once', *klasnąć* 'clap once', *ćwierknąć* 'chirp once', *kaszlnąć* 'cough once', etc.) (Grzegorczykowa et al.1984: 475), which in the cluster model are defined as Single Act Perfectives (SAP's). The reason for the impression of semantic closeness between *za*-prefixed inchoatives (CAP's) and the corresponding *–ną-* suffixed semelfactives (SAP's) in verbs of sound production is the momentariness (short duration and abruptness) of the denoted event, a feature typical of semelfactive acts. As the shift from silence to sound in verbs denoting acoustic phenomena takes but a moment, it is often perceived as sudden and abrupt.

In examples (8) and (9), the 'momentary' *za*-inchoatives ***za****skrzypieć* '*za*-squeak' and ***za****drgać* '*za*-tremble' can be substituted by the corresponding Single Act semelfactives *skrzyp**nąć*** 'squeak once' and *drg**nąć*** 'tremble once', with no perceivable meaning difference:[17]

(8) *Drzwi **za**skrzypiały* / *skrzyp**nęły.***
'The door (?? started to squeak)/ squeaked.'

(9) *Powieka mu **za**drgała* / *drg**nęła***
'His eyelid moved/trembled'

Acoustic *za*-inchoatives and the corresponding *-ną-* semelfactives are not always exchangeable, but the very possibility of substitution points to a semantic overlap between inchoativity and semelfactivity. The consequence for a cluster model description of *za*-perfectives in Polish will be the possibility to include momentary *za-* inchoatives in the class of Complex Acts and in the class of Single Acts.

2.2 *s-/z-* INCHOATIVES. The *s-/z-* inchoative perfectives *zrozumieć* 'come to understand' *zmartwić się* 'begin to worry'*, spodobać się* 'start liking' (listed in (9)) belong to the class of verbs referred to as 'complex' (*czasowniki kompleksowe* in Grzegorczykowa et al. 1984: 475). The distinguishing characteristic of complex verb pairs is the reversed relationship between the imperfective and the perfective derivative. The perfectivizing prefix of the perfective does not indicate the result of the activity expressed by the unprefixed imperfective (as in the prototypical aspectual pairs *robić*^{i} 'do' : ***z****robić*^{p} 'get done'), but points to the beginning of the verbal situation. Because of their ingressive meaning, these *s-/z-* perfectives belong to the category of inchoatives along with the *za-* perfectives indicating the beginning of a mental or physical state, such as *zachorować* 'get sick', *zakochać się* 'fall in love', *zasmucić się* 'become sad'*, zaniepokoić się* 'start worrying'*,* etc.

(10) ***z****rozumieć* (**z**-understand) 'begin to understand' < *rozumieć* 'understand'
z*martwić się* (***z***-worry) 'begin to worry' < *martwić się* 'worry'

translation). Janda (2011: 6) does not include single-occurrence complete engagement in an activity in her interpretation of the verb "quantize".

[17] In the pairs: *zagrzmieć* '*za*-thunder' vs. *grzmotnąć* 'thunder once'; *zapukać* 'za-knock, start knocking' vs. *puknąć* 'knock once'), the *za*-prefixed verb cannot be replaced by the corresponding *–ną*-suffixed semelfactive because these verbs denote iterative activities: the *za*-inchoative denotes the beginning of a series of individual thunders or knocks while the *-ną-* semelfactive relates one thunder or one knock (out of many possible ones). Cf: *W południowo-wschodniej Polsce **zagrzmi /*grzmotnie** znowu tej nocy* 'It will ***za*-thunder** (will thunder) [not *will thunder once] again in south-east Poland tonight.' (TV Polonia, *Wiadomości*, July 9, 2012)

***s**podobać się* (**s**-like) ‘begin to like’ < *podobać się* ‘like’

The complex *s-/z-* perfectives denote psychological (or physical) states, but they are different from deadjectival *s-/z-*inchoatives whose imperfectives indicate processes. While the ‘become’ inchoative *zgłodnieć* is derived from the imperfective *głodnieć* which denotes the **process** of becoming hungry (not the state of being hungry), the complex inchoative *zrozumieć* comes from the imperfective denoting the non-changeable mental **state** of understanding.

In the cluster model of aspect, the complex *s-/z-* perfectives like *zrozumieć,* which denote states, will be classed with Complex Act ingressives that express actions (*zaśpiewać, zagrać*) because of the non-Completable character of their imperfectives. At the same time, because they form aspectual pairs with their unprefixed imperfectives, they have to be included in the category of Natural Perfectives. That means that in the cluster model for Polish the definition of Natural Perfectives (“natural partners of Completable imperfectives”) would have to be changed (or relaxed) to accommodate the non-Completable *s-/z-* inchoatives with the reversed imperfective-perfective relationship.

2.3. *S-/Z-* DENOMINAL INCHOATIVES AND THE ALLOMORPHY HYPOTHESIS. A small group of *s-/z-* denominal inchoatives deserves attention because of the SCL Allomorphy Hypothesis which involves this type of perfectives. This type has *s-/z-* perfectives derived from names of animals associated with some negative characteristics or from other nominal epithets with negative connotations as represented by the sample examples in (11):

(11) *ześwinić się* (*ze*-be a pig) ‘behave like /become a pig’ < *świnia* ‘a pig’
zwariować (*z*-be crazy) ‘act/become crazy’ < *wariat* ‘a lunatic’
stchórzyć (*s*-be a coward) ‘act like/ become a coward’ < *tchórz* ‘a coward’
zbiesić się (*z*-be a devil) ‘act like a devil’ < *bies* ‘a devil’

In terms of their morphological structure (denominal derivatives) and because of their Completable, process-denoting imperfectives, these *s-/z-* perfectives belong to the inchoative perfectives of the ‘*become*^{p} (*stać się*) + Noun’ type, together with denominal derivatives such as: *skostnieć* ‘become like [a] bone’, *skamienieć* ‘become a piece of rock’, *schłopieć* ‘become [like] a peasant’, *spienić się* ‘become like foam’ (Grzegorczykowa 1984: 498). They are different from typical inchoatives of the ‘become^{p} + N’ type in that they concern the subject’s behaviour rather than one of its general characteristics and because they express the speaker’s subjective (negative) evaluation of that behaviour. The *s-/z-* verbs of subjective assessment refer to punctual instances of the subject’s behaviour manifested in the subject’s acts, as illustrated by the *PELCRA* corpus examples (12) and (13):

(12) *Zaszłam w ciażę. Przyszły ojciec … **stchórzył** i mnie zostawił.* (PELCRA NKJP)
‘got pregnant. The future father … **s-acted like a coward** and left me.’

(13) *Kurs **zwariował**. Wskazania były co chwila inne.*
‘The stock market **s-acted crazy.** It showed different values every other minute.’

In (12), the *s-/z-* inchoative *stchórzył* ‘became a coward/acted like a coward’ evaluates as cowardly the act of a future father who left his pregnant girlfriend.

In (13), the verb *zwariował* ‘became a lunatic/acted as a lunatic’ likens the unpredictable behaviour of stock market rates to the actions of a lunatic. In both cases the *s-/z-* perfectives refer to individual acts performed by the subjects, and in that sense their meaning is comparable to the

'do-it-once' meaning of *-nq-* semelfactives such as *szczypnąć* 'pinch once', *klęknąć* 'kneel down once'. Following the interpretation of the Russian *s*-prefixed verbs such as *sxitrit', soriginalčit'* proposed by Isačenko (1968), Dickey & Janda (2009) suggested that in the cluster model of aspect, Russian *s*-perfectives that express subjective assessment should be considered Single Acts, i.e. verbs of the do-it-once type, and classed together with the *-nu-* suffixed semelfactives (*kriknut'* 'shout once'). They proposed the *s-/-nu-* Allomorphy Hypothesis, which states that in Russian the prefix *s-* in verbs of subjective evaluation and the semelfactive suffix *-nu-* are allomorphs. In spite of the semelfactive interpretations of the *s-/z-* denominal inchoatives in (12) and (13), the allomorphy of the prefix *s-/z-* and the suffix *-nq-* cannot be proposed for Polish because evaluative Single-Act interpretations are possible in verbs with at least three other prefixes: *za-* (*zaszaleć* 'act crazy'), *o-* (*oszaleć* 'go crazy and act accordingly', *ogłupieć* 'become/act foolish') and *wy-* (*wycwanić się, wygłupić się* 'act as a fool', *wyświnić się* 'act dishonorably, as a pig'), as illustrated in (14):

14. a. ***Wygłupił się*** *tą niestosowną propozycją.* (SWJP)
'He ***wy*-acted** as a fool when he made that inapropriate suggestion.'
b. ***Zaszalałam*** *i kupiłam nowy płaszcz.* (SWJP)
'I ***za*-acted** irresponsible and crazy and I bought a new coat'
c. ***Oszalał*** [*z radości*] *i ucałował pana dyrektora.*
'He ***o*-acted** crazy [went nuts (for joy)] and kissed the principal.'

3. CONCLUSIONS. An examination of Polish *za-* and *s-/z-* inchoatives in the light of the recent proposals in SCL (cluster model of aspect, the semelfactive Allomorphy Hypothesis and the East-West aspectual classification of Slavic languages) has led to the following conclusions:

1. Polish *za-* inchoatives (***za****śpiewać,* ***za****kwitnąć)* are ambiguous between the meanings of inchoativity and single-occurrence completion. In the cluster model, they have to be assigned to two perfective types: ingressive CAP's and perfectivizing NP's. Since their Imperfectives are non-Completable and NP's are defined as strongly Completable (Janda 2011), the Completability requirement for Natural Perfectives has to be relaxed to accomodate *za-* perfectives that express unitary completion and have non-Completable Imperfectives as their aspectual partners.

2. Polish, unlike Russian, has *s-/z-* inchoatives (***z****rozumieć,* ***z****martwić się)* that express mental or physical states. Because their Imperfectives are non-Completable, these inchoatives have to be classed as CAP's along with the state-denoting *za-* inchoatives (***za****chorować 'za-*be sick', ***za****kochać się* '*za-*love') and action-denoting *za-* ingressives (***za****śpiewać,* ***za****tańczyć*). These inchoatives are different from deadjectival/ denominal *s-/z-* inchoatives (***z****głodnieć,* ***s****kostnieć*) that express Completable processes and are classed as NP's.

3. Polish *za-*inchoatives denoting momentary acoustic events (***za****skrzypieć 'za-*squeak*'*) have semelfactive readings, like the *s-* prefixed denominal inchoatives expressing subjective evaluation of the subject's behaviour in single acts (***s****tchórzyć 's-*chicken out*'*). If the semelfactive Allomorphy Hypothesis were to be postulated for Polish, it would have to include all prefixes allowing semelfactive interpretation (*s-/z-, za-, wy-, o-*), not just the prefix *s-*, as in Russian.

4. Considering the productivity of *s-/z-* prefixation in inchoative verbs such as

***z**denerwować się* ‘become nervous’, ***s**powszednieć* ‘become daily’, Polish appears to be closer to Czech than to Russian in the aspectual East-West division of Slavic.

5. Russian tends to employ the inchoative *za-* prefixation more freely than Polish (***za**govorit’* vs. *zacząć mówić*, ***prze**mówić* ‘start talking’).

REFERENCES

BACZ, BARBARA. 2007a. *S-/Z- prefixation and aspect in Polish.* In Cognition in language [volume in honour of Professor Elżbieta Tabakowska], ed. by W. Chłopicki, M. Gibińska-Marzec, J. Ozga, A. Pawelec, and A. Pokojska, 85-106. Kraków: Tertium.

---. 2007b. *Verbal prefixation in Slavic: Z-prefixed perfectives in Polish.* LACUS Forum XXXIII: 249-59.

---. 2012. *Reflections on semelfactivity in Polish.* Studies in Polish linguistics 7, 107-28. Published online at www.wuj.pl

BARTNICKA, BARBARA, & HALINA SATKIEWICZ. 2000. *Gramatyka języka polskiego.* Warszawa: Wiedza Powszechna.

DICKEY, STEPHEN, M. 2000. *Parameters of Slavic aspect.* Stanford: CSLI Publications.

---. 2005. *S-/Z- and the grammaticalization of aspect in Slavic.* Slovene linguistic studies 5. Ljubljana: Lawrence, 3-55.

---, & LAURA A JANDA. 2009. *“Hohotnul, shitril: The relationship between semelfactives formed with -nu- and s- in Russian.*” Russian linguistics 33:3, 229- 48.

GRZEGORCZYKOWA, R, ET AL. 1984. *Gramatyka współczesnego języka polskiego.* Morfologia. Warszawa: PWN.

ISAČENKO, ANDREI V. 1968. *Die russische Sprache der Gegenwart, I: Formenlehre.* Halle: Max Niemayer.

JANDA, LAURA A. 2007. *Aspectual clusters of Russian verbs.* Studies in language 31(3), 607-48.

---. 2011. *Completability and Russian aspect.* In Slavic linguistics in a cognitive framework, ed. by Marcin Grygiel and Laura A. Janda, 11-35. Vienna: Peter Lang GmbH.

JANOWSKA, ALEKSANDRA, & MAGDALENA PASTUCHOWA. 2005. *Słowotwórstwo czasowników staropolskich.* Kraków: Universitas.

ŁAZIŃSKI, MAREK. 2008. *O głosowaniu i zagłosowaniu: Polityczne aspekty aspektu.* In Aspekte, kategorien und kontakte slavischer sprachen: Festschrift für Volkmar Lehmann zum 65. Geburstag. Studien zur Slavistik, Band 16, ed. by Bernhard Brehmer, Katrin Bente Fischer & Gertje Krumbholz,. Hamburg: Verlag Dr. Kovač (MS).

MAKAROVA, ANASTASIA, & LAURA, A JANDA. 2009. *Do it once: a case study of Russian -nu- semelfactives.* Scando-Slavica 55, 78-99.

PELCRA NKJP: *Pelcra National Corpus of Polish* (Łódź University, 2004)

SJP PWN: On-Line Słownik języka Polskiego PWN

Słoński, Stanisław. 1937. *Funkcje prefiksów werbalnych w języku starosłowiańskim (starobułgarskim).* Warszawa: Nakładem Towarzystwa Naukowego Warszawskiego.

Śmiech, Witold. 1986. *Derywacja prefiksalna czasowników polskich.* Wrocław-Warszawa-Kraków-Gdańsk-Łódź: Zakład Narodowy im. Ossolińskich.

SWJP: Słownik współczesnego języka Polskiego, ed. by Bogusław Dunaj, 1996. Warszawa: WILGA

SWO: On-Line Słownik wyrazów obcych.

SJP: On-Line Słownik języka Polskiego, ed. by Witold Doroszewski.

Tabakowska, Elżbieta. 2003. *Space and time in Polish: The preposition za and the verbal prefix za-.* In: Motivation in language [Studies in honour of Günter Radden] edited by Herbert Cuyckens et al., 153-77. Amsterdam: John Benjamins.

This article was first published at www.lacussquare.org.

LACUS Forum **39:2.14-21 (2025)**

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A HARD-SCIENCE LINGUISTICS ANALYSIS OF COREFERENCE

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Abstract: An instance of what is usually thought of as co-reference among words, a scene from the movie *The Odd Couple* (1968), is examined using the HSL framework. But it is demonstrated that the idea of *co-referentiality among words* does not adequately describe what is happening. As Burazer says, "It is people who refer, not words." In addition, it is shown that ordinary ways of thinking about concepts and context are also inadequate, and that the HSL constructs of orthoconcept and domain of control, both introduced by Yngve, are more powerful explanatory tools in the description of people communicating.

Keywords: reference, orthoconcepts, humor, human linguistics, hard-science linguistics, HSL
Languages: English

IN ONE OF THE FUNNIEST SCENES OF THE MOVIE *The Odd Couple* (1968), roommates Oscar and Felix are having what amounts to a domestic squabble. Felix ruined their chance for a double date the night before, and Oscar is furious. Supercilious Felix is sitting at the dining table about to eat his dinner; angry Oscar is in the living room reading a newspaper. (Notes describing some of the events are added in brackets [ ].)

Oscar: You talkin' to me?
Felix: Yeah, I'm talking to you.
Oscar: Whadda ya wanna know?
Felix: I just want to know if you're going to spend the rest of your life not talking to me. And if you are, I'm going to get a radio. [Chuckles.]
Oscar: You had your chance to talk last night. [Stalks into the dining room.] I begged you to come upstairs with me. Here. Here's a key to the back door. [Slams the key down onto the table and taps at it.] Now, you stick to the hallway and your room and you won't get hurt.
Felix: Uh, meaning what?
Oscar: Meaning that if you want to live here, I don't wanna see ya, I don't wanna hear ya, I don't wanna smell your cooking. Alright? Now kindly remove that spaghetti from my poker table.

Felix: [Laughs and makes a dismissive gesture.]
Oscar: What the hell is so funny?
Felix: It's not spaghetti. It's linguine. [Chuckles.]
Oscar: [Picks up the plate, steps to the kitchen door and hurls the plate against the kitchen wall, splattering linguine and plate shards.] Now it's garbage.

When we look at a situated interaction, we frequently notice interesting instances of what is usually thought of as co-reference among words. Here, at the center of the humor and providing the set-up for the punch line, is the supposed co-referentiality between "spaghetti," "linguine," and "garbage" — supposed because the idea of **co-referentiality among words** does not adequately describe what is happening.

1. WORDS DON'T REFER, PEOPLE DO. "The sound waves [of speech] do not carry their meaning from speaker to hearer as ancient theory would have it" (Yngve 1996:4). As Yngve further points out, "remember that the interpretation of a noise depends not only on the noise, but also on the equipment in the head of the hearer". Yngve therefore wrote of "the act of referring" (1996:81) rather than of reference of words. Burazer (2006:115) emphasizes the point: "It is people who refer, not words"; she suggests that we should not focus on the reference of a word, but rather on **the referring behavior of a person**. The case examined here will demonstrate the importance of this focus in better understanding what has usually been thought of in terms of co-reference of words.

2. PEOPLE REFER TO **THEIR OWN** CONCEPTS, NOT TO THINGS. The question of whether words refer to things naturally or by social convention is a very old one. Seuren (1998:6-8) discusses the debate as it was framed, for example, in Plato's *Cratylus* over two thousand years ago. That ancient debate is obliquely connected to a more recent one about whether the reference of words should properly be thought of as to things themselves or to the understanding people have of things. Modern linguistics has come down solidly on the side of reference being to concepts, rather than to things directly; see, for example, Saussure's well-known definition of a sign being composed of signifier (*signifiant*) and signified (*signifié*) and their relationship.

Hard-Science Linguistics takes what at first may seem to be a similar view. Yngve gives the example (1996:80) of a person removing a play from a shelf and saying "This was her most successful."

> When the speaker takes the play off the shelf, his properties also include a focus of attention on this play. There is a concept of the play in his head, which means that [the concept] is... part of his properties. When he says this, we can say that he is referring to (or through) the concept of the play and that certain activities take place in his head resulting in changed properties to reflect that the reference has been made.

One very important element implicit in Yngve's account is how it applies a construct (which he labels in the above a "concept") that is very different from the traditional construct of a concept.

Saussure refers to "*the* concept X" [emphasis added] repeatedly throughout *Course* (Saussure 1959: *passim*), and never to "a person's concept of X". This is not accidental. As Saussure says elsewhere (1959:19),

> Language exists in the form of a sum of impressions deposited in the brain of each member of a community, almost like a dictionary of which identical copies have been distributed to each individual.

Compare Chomsky's well-known and widely-accepted construct of an idealized speech community consisting of identical native speaker-listeners (1986:16). Saussure says the sign is established by a linguistic community (1959:69), assuming the concept (signified), the sound-image (signifier), and whole resulting from the link between them (the sign) to be an *invariant* in the linguistic community. Although Saussure, like Chomsky later, claims that "the concept X" is a **psychological** construct belonging to an individual, both actually assign its form and invariance to the community; they make the concept therefore a property of a language — an idealized, abstract invariant, not a property of an individual person, each of whom is unique.

Now contrast the usual linguistic construct of a concept with what Yngve has in mind. He instead describes a situation in which each person has as an individual property a (potentially unique) concept in his head to ("or through") which he refers. Yngve (2006) later developed the HSL construct of an orthoconcept to describe this property, which has been elaborated on by Yngve (2007), Coleman (2011), and Sypniewski & Coleman (2011), among others. As these authors have shown, it is difficult, if not impossible, to describe precisely the linguistic events of many everyday situations — such as those involving misunderstanding or lying — if we make the unjustified assumption that each person in a speech community has identical linguistic knowledge, including an inventory of identical concepts. The current case in point (the scene from *The Odd Couple*) will also make it very clear that a construct of individual orthoconcepts is necessary if we are to understand how referring behavior works in everyday situations.

3. THE PREDICTIVE WEAKNESS OF "CONTEXT". It is common practice in the field to distinguish linguistic context from extra-linguistic context, though both are often called simply "context". Some treat linguistic context very narrowly, such as Weischedel (1979:156), who talks in terms of "previous text". Crystal's explanation of linguistic context (1987:105), however, is a better guide to a more typical understanding in modern linguistics: he treats the linguistic context as consisting of surrounding (not just preceding) text. Some have put it in terms of a logical representation of the text: McCawley (1979:372), for example, describes the linguistic context as "the set of propositions that the speaker and addressee(s) can take for granted at the given point of the discourse".[1]

Of greater concern for the present study is the construct of extra-linguistic context. Extra-linguistic context is typically regarded as consisting of some non-language entities, including non-language "mental objects" as well as a person's physical surroundings. For Weischedel (1979:156), for example, extra-linguistic context includes "cultural rules, universal laws, etc." Levinson (1983) takes a similar stance, asserting that extra-linguistic context is not "actual situations of utterances in all their multiplicity of features" but instead "just those features [of situations] that are culturally and linguistically relevant to the production and interpretation of utterances". It is worthy of note that neither Weischedel's "etc." nor Levinson's "relevant features" are normally specified, and more importantly, no mechanism for their identification is usually provided.

A notable exception is in Lamb's relational network theory. He gives the example of the

[1] What is very interesting about the more generally-accepted view is that it makes us wonder how speech that has not yet been produced can comprise part of the context for a person's understanding.

disambiguation of *Give me a ring!* which he says (1999:80)

> could be a request for a telephone call or a metal band or other circular object. In most cases in real life there will be activated connections from the perception of the situational context [i.e., extra-linguistic context] that will prevent all but one of the interpretations from getting registered consciously.

From this tantalizing hint and a diagrammatic representation that shows in a general way how a connection activated from perception of the extra-linguistic context might result in disambiguation (188), Lamb's comments suggest that relational network theory could, in fact, handle extra-linguistic context in a detailed and precise way. We get a glimpse of how this might happen in an example provided to Lamb by Peter Reich: *Are you ready to zoom to the camera store?* (190). However, as an example, the connections shown for the semiology of *Are you ready to zoom to the camera store?* do not explicitly show how extra-linguistic context applies, since all of the connections are from other parts of the semology. See Lamb's discussion of meaning (122-25) in which he identifies meaning with conceptual subsystems which act as a mediator between linguistic and perceptual systems (the latter presumably to include perceptual memory, not just processing resulting from perceptual inputs). In fact, Lamb (1999:125) explicitly states that an *ideonection* (such as ZOOM$_1$, ZOOM$_2$, or ZOOM LENS) is a "*semological* nection" (emphasis added).

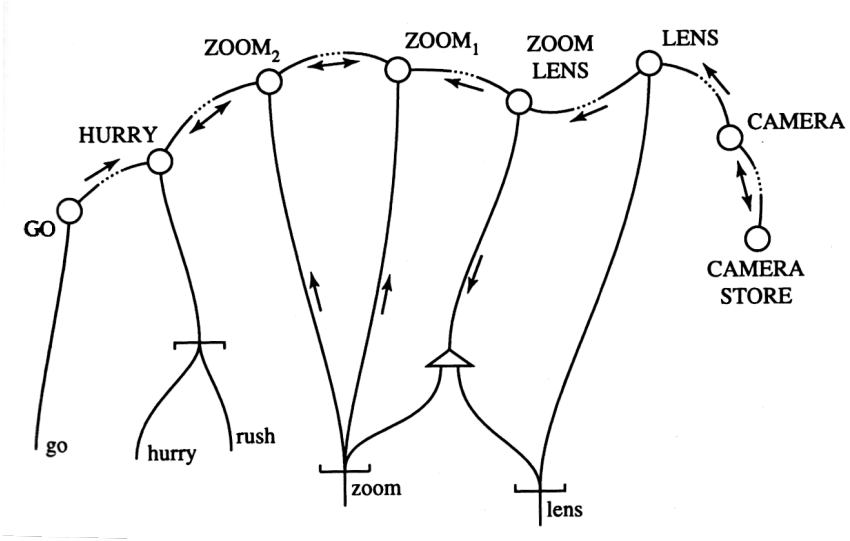

Figure 1. "Are you ready to zoom to the camera store?" (Lamb 1999:191).

4. THE PREDICTIVE POWER OF "DOMAIN OF CONTROL". In a Hard-Science Linguistics framework, we focus not only on the speech, but also can —and do — characterize the relevant objects in very precise terms. The relevant objects (modeled as props) are themselves a part of the communicative interaction as a whole (modeled as a linkage) by means of energy flow among them (modeled as channels) and the people (modeled as participants).[2] In HSL, anything in the real world that is

[2] Props, participants, and channels are models of the structural aspects of relevant objects, people, and energy flow within a communicative interaction. In HSL we also model the functional aspects of objects, people, and energy flow in terms of prop parts, role parts, and channel parts. For a discussion of the importance of the distinction between models of structural and functional aspects of things in the real world, see Yngve (1996:195).

relevant to the description of people communicating is treated as "linguistic". This includes physical properties of people that we think of in everyday terms as related to their understanding of their surroundings. Thus, we have formal mechanisms for representing relevant elements of the surroundings in which people are communicating, as well as each person's understanding of the relevant elements of their surroundings. In this way we can explicitly model the ways such properties of people affect how they communicate.

In an HSL model, we refer to the relevant properties in this case as the **domain of control**.

> [A]t any given moment some procedures [in the linguistic properties of a person] have been triggered and are active, some have nearly all their conditions satisfied and are ready to be triggered, and others have some of their conditions satisfied and are ready to be made ready. The active procedures or those that stand ready or nearly ready to be triggered constitute [the domain of control]. (Yngve 1996:276)

An HSL treatment of the relevant aspects of the environment in the interaction between Felix and Oscar begins with a linkage model, the description of the interaction as whole. We give this as (1).

(1) [Domestic Quarrel] = [Felix] + [Oscar] + [plate of pasta] + [table] + [key]

Here, we identify [Felix] and [Oscar] as participants, models of the people who are communicating. They speak about certain things in their environment, which we model as the props [plate of pasta], [table], and [key]. We identify the linkage [Domestic Quarrel] as a model of the overall physical system that these elements comprise. We are not giving all the details here.

(2) (a) [Quarrel Obs 1] = [Oscar-obs] + [Domestic Quarrel]
    (b) [Oscar]<[plate of pasta]<refer/spaghetti>>
(3) (a) [Quarrel Obs 2] = [Felix-obs] + [Domestic Quarrel]
    (b) [Felix]<[plate of pasta]<refer/linguine>>

We can also model Oscar's understanding of the interaction (including his understanding of its relevant aspects) as [Quarrel Obs 1] and Felix's understanding of it as [Quarrel Obs 2]. We label these linkages with "Obs" because the person's understanding arises out of their role as an observer in an observing linkage (Yngve 2006, 2007 passim, Coleman & Sypniewski in press). Thus, in (2) (a), we are representing Oscar's functional aspect as an observer (his role part); [Quarrel Obs 1] consists of [Oscar-obs] and the other linkage which he is observing [Domestic Quarrel]. Out of his role as an observer of [Domestic Quarrel], we see Oscar's understanding of one of the key elements in his environment arise. We model his understanding of the plate of pasta as [Oscar]<[plate of pasta]<refer/spaghetti>>, which describes a property of Oscar. The first part of this identifies the physical system to which the property belongs [Oscar]. The part in pointed brackets < > identifies what follows, <[plate of pasta]<refer/spaghetti>>, as a property of [Oscar]. In (2) (b), because it is inside pointed brackets, [plate of pasta] does not refer to the plate of pasta as a system, as in (1). Here it refers instead to Oscar's understanding of the plate of pasta. The last part, <refer/spaghetti>, is part of what Oscar understands to be a property of a plate of pasta, that is, that it is referred to as "spaghetti". Thus, <refer/spaghetti> does not represent a property of the plate of pasta, but part of a property of Oscar. See (2) (b).

We have a parallel way of describing Felix's understanding of the elements in his environment in (3) (a) and (3) (b). There is a key difference in their understanding of how to refer to a relevant object in their environment. This is represented by the difference between (2) (b) and (3) (b), above.

(4) (a) Oscar: ...Now kindly remove *that spaghetti* from my poker table.
(b) Felix: [Laughs and makes a dismissive gesture.]
(c) Oscar: What the hell is so funny?
(d) Felix: *It*'s not *spaghetti*. *It*'s *linguine*. [Laughs.]
(f) Oscar: [Picks up the plate, steps to the kitchen door and hurls the plate against the kitchen wall, splattering linguine and plate shards.] Now *it*'s *garbage*.

The speech of Oscar and Felix is not the only relevant means of energy flow involved in the communication between them. If we watch carefully, we see that there are manual gestures and directed gaze that are coordinated with spoken references to the plate of pasta. Oscar points at the plate of pasta and looks down at it as he says, "that spaghetti" — see (4) (a). Both times he says "It" in (4) (d), Felix looks at the plate of pasta. Oscar picks up the plate (a manual gesture focused on the plate of pasta, to be sure) and hurls it at the wall, first directing his gaze where it hits the wall, then standing where Felix's line of sight at him is also aligned with what's left of most of the plate of pasta on the kitchen wall. We model each relevant instance of energy flow with a channel. Here the relevant instances all involve speech (sound waves) and either the perturbation of light waves with a manual gesture or directed gaze or, in one case, kinetic energy imparted directly to the plate of pasta.

If we take a closer look at the speech of the two people here, we also see that the initial references to the plate of pasta are in terms of its structural aspect. Oscar refers to it as "spaghetti" in (4) (a), while Felix refers to it as "not spaghetti" but as "linguine" in (4) (d).

The pasta begins in one physical state, which Felix understands in a cognitive category *linguine* (distinct from spaghetti) and which Oscar understands in a cognitive category *spaghetti*. This difference in their understanding of the plate of pasta was represented in (2) (b) and (3) (b), remember.

In HSL, we can describe Felix's laughter at one point in terms of a difference of the two roommates' separate understandings of the pasta dish, modeled as orthoconcepts. The respective orthoconcepts in (2) (b) and (3) (b) model different properties they have as participants, but are connected to the same object through how they each interact with it. In addition, when Oscar says "that spaghetti", points at the plate of pasta, and directs his gaze at it, Felix, as observer of the interaction, now has an understanding that Oscar's understanding of the plate of pasta (5) (a) is different from his own understanding (3) (b), repeated here as (5) (b) for easier comparison.

(5) (a) [Felix]<[Oscar]<[plate of pasta]<refer/spaghetti>>>
(b) [Felix]<[plate of pasta]<refer/linguine>>
(6) [Felix]<
<[plate of pasta]<name/linguine> >
x <[Oscar]<[plate of pasta]<name/spaghetti>> >::
<[Oscar]<misname[plate of pasta]>>
>

Felix laughs because he now understands that Oscar has referred to the plate of pasta (in Felix's view) in a way that indicates ignorance. We can model how his understanding of Oscar's ignorance arises. In (6), <[plate of pasta]<name/linguine>, remember, models Felix's understanding of the plate of pasta and of how he refers to it. Another part of (6), <[Oscar]<[plate of pasta]<name/spaghetti>, represents Felix's understanding of Oscar's understanding of the plate of pasta. When the both are active, this leads to Felix's understanding that Oscar has misnamed the plate of pasta <[Oscar]<misname[plate of pasta]>. In HSL, we show this by means of a setting procedure (indicated by the "::"). We can read the Boolean notation in the setting procedure in (6) as "If the expression <[plate of pasta]<name/linguine> **AND** <[Oscar]<[plate of pasta]<name/spaghetti> becomes **TRUE**, then <[Oscar]<misname[plate of pasta]> is set to **TRUE**.

(7) [Felix]<
<[Oscar]<misname[plate of pasta]> x <angry> x <supercilious> ::
<laugh> → <correct>
>

(8) [Felix]<correct> =
<emit sound of "It's not spaghetti. It's linguine."> + <coordinate gaze>

While Felix and Oscar at first refer to the pasta by saying "spaghetti" or "linguine," they are referring to their understanding of its initial physical form, which is the basis for Felix's disdainful correction, "It's not spaghetti. It's linguine." We can describe how Felix's active properties, which represent a domain of control, lead him to offer a sarcastic correction. To describe this event, another setting procedure (7) can be used. The conditions for this setting procedure are (a) that Felix understands Oscar has misnamed the plate of pasta <[Oscar]<misname[plate of pasta]>, that Felix is angry <angry>, and that Felix is by nature supercilious <supercilious>. When all three are Boolean **TRUE**, a pair of task procedures is activated, in sequence <laugh> and <correct>. The second, <correct>, has two subtasks which are activated simultaneously (8). The first, <emit sound of "It's not spaghetti. It's linguine.">, consists of a series of ordered articulatory subtasks. As they are being executed, there are two points — when "It" is being articulated — where a conditional property is activated to coordinate the articulation with directed gaze. The formal details of how this is done are beyond the scope of this paper, but those curious about how HSL can coordinate simultaneous subtasks should see Yngve (1996: 271-274) and Coleman (2006). For the moment, it is enough to say that the "+" in (8) indicates that the subtasks <emit sound of "It's not spaghetti. It's linguine."> and <coordinate gaze> are activated at the same time and execute in parallel.

(9) [Oscar]<
<[Felix]<[Oscar]<misname[plate of pasta]> x
<angry> x <[plate of pasta]<~food>> ::
<emit sound of "Now it's garbage.">

However, when Oscar changes the physical properties of the plate of pasta near the end of the scene, his last reference is to his understanding of its functional aspect within the linkage. He understands that it no longer has the prop part [food], but instead the prop part [garbage]. We model this understanding with the change in an orthoconcept from [Oscar]<[plate of pasta]<food>> to [Oscar]<[plate of pasta]<~food>>, where the "~" indicates Boolean negation; see (9).

5. CONCLUDING REMARKS. In general, "The tradition tends to think of a referential domain as static and given in a lexicon" Yngve (1996:330, fn. 91). The tradition allows for context to have an influence on reference. Unfortunately, with only a few exceptions (e.g., Lamb 1999), it treats context either as an aspect of language (linguistic context) or treats it so vaguely as to be uninformative (extra-linguistic context). However, referencing behavior actually depends on "the dynamically changing domain of control" Yngve (1996:330, fn. 91) affected by a person's properties and how these respond to the person's environment.

REFERENCES

BURAZER, LARA. 2006. Human Linguistics and referring in the real world. *LACUS Forum* 32:155-61.

CHOMSKY, NOAM. 1986. Knowledge of Language: Its nature, origin, and use. New York: Praeger Scientific.

COLEMAN, DOUGLAS W. 2006. A formal integrated view of speech, gesture, gaze and its implications for learning. *LACUS Forum* 32:163-72.

---. 2011. Theory of mind in Hard-Science Linguistics. *LACUS Forum* 36:91-99.

COLEMAN, DOUGLAS W., & BERNARD SYPNIEWSKI. (2017) Orthoconcepts: How the properties they represent arise. *LACUS Forum* 37.

CRYSTAL, DAVID. 1987. *The Cambridge Encyclopedia of Language*. Cambridge, UK: Cambridge University Press.

LAMB, SYDNEY M. 1999. *Pathways of the brain: The neurocognitive basis of language*. Philadelphia: John Benjamins.

LEVINSON, STEPHEN C. 1983. *Pragmatics*. Cambridge, UK: Cambridge University Press.

MCCAWLEY, JAMES D. 1979. Presupposition and discourse structure. In *Syntax and semantics: Presupposition*, ed. by Choon-Kyu Oh and David A. Dinneen, 371-88. New York: Academic Press.

Now It's Garbage! 2008. Clip from *The Odd Couple* [1:05]. Accessed 09/01/2012: http://www.youtube.com/watch?v=LDXSXkYoM5Y.

The Odd Couple. 1968. Dir. by Gene Saks. Los Angeles: Paramount Pictures International.

SAUSSURE, FERDINAND DE. 1959. Course in General Linguistics (Trans. by Wade Baskin from the orig., pub. in 1915). New York: McGraw-Hill.

SEUREN, PIETER A. M. 1998. *Western linguistics: An historical introduction*. Malden, MA: Blackwell.

SYPNIEWSKI, BERNARD, & DOUGLAS W. COLEMAN. 2011. Lies and lying in Hard-Science Linguistics. *LACUS Forum* 36:291-98.

WEISCHEDEL, RALPH M. 1979. A new semantic computation while parsing: Presupposition and entailment. In *Syntax and semantics: Presupposition*, ed. by Choon-Kyu Oh and David A. Dinneen, 155-82. New York: Academic Press.

YNGVE, VICTOR H. 1996. *From grammar to science: New foundations for general linguistics*. Philadelphia: John Benjamins.

---. 2006. Formalizing the observer in hard-science linguistics. *LACUS Forum* 32:267-76.

---. 2007. People, orthoconcepts, and dialog. *LACUS Forum* 33:313-19.

This article was first published at www.lacussquare.org

LACUS Forum **39:2.22-33 (2025)**

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PRAGMATICS AND AUTISM SPECTRUM DISORDERS: A PRELIMINARY REVIEW

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Abstract. Autism spectrum disorder (ASD) is a neurodevelopmental disorder wherein difficulties with pragmatic aspects of language are common across its various presentations. In this paper, we critically examine several papers addressing the pragmatic skills of individuals with ASD with respect to four main areas of concern: a lack of recognition of both theoretical and practical linguistic pragmatic distinctions, attempts to group together individuals with different forms of ASD for the purposes of generalization, the use of a deficit model to investigate the communicative skills of individuals with ASD, and the assumption of a barrier between neurotypical (normally-developing) competence and the competence of individuals with ASD. While much ASD research both acknowledges and investigates the range of pragmatic ability across the autism spectrum, we believe it useful to draw attention to areas where this range is not yet fully recognized.

Keywords: autism spectrum disorder, pragmatic impairment, deficit model, explicature, implicature, Relevance Theory, diagnostics

THE CONSIDERABLE VARIATION in symptomatology of individuals with autism has led to the collective term autism spectrum disorder (ASD), which refers to any condition on the autism spectrum. ASDs are pervasive developmental disorders, meaning that development in several areas is impaired and these impairments persist throughout an individual's life. Individuals with ASD can be classified as either high-functioning or low-functioning, depending on their social performance skills. A high-functioning individual may speak well, get a job, and make a living, whereas a low-functioning individual may not be able speak at all. In the latter case, both structural (phonology, morphology, syntax) and performative (mainly pragmatic) language skills are described as *impaired*. In higher-functioning individuals, however, abilities in phonology, morphology, syntax, and semantics approach or equal what one would expect from neurotypicals (typically-developing individuals). High-functioning individuals with ASD, usually noted in the literature as having a diagnosis of high-functioning autism (HFA) or Asperger's syndrome (AS), find the greatest linguistic challenge to be pragmatics (Surian et al. 1996).

The aim of this paper is to review the recent literature on pragmatic impairments and ASD and

provide critical feedback on four areas of concern:

a) a lack of recognition of key theoretical linguistic and pragmatic distinctions including practical considerations;
b) attempts to group together individuals with different forms of ASD for the purposes of generalization;
c) the use of a deficit model to investigate the communicative skills of individuals with ASD;
d) the assumption or creation of a barrier between neurotypical (normally-developing) competence and the competence of individuals with ASD.

1. PRAGMATIC CONCEPTS. In the linguistics literature, there are several pragmatic impairments that are commonly observed in high-functioning individuals with ASD. These include difficulties with cohesion and coherence, literalism, difficulty with conversational topic, lack of or impaired ability with regard to Theory of Mind tasks (explained below), and violation of Gricean maxims (de Villiers et al. 2007: 293-294).

In a series of studies from the 1980s and 1990s, a number of researchers (Frith & Happé 1999; Happé 1993; Baron-Cohen et al. 1985, 1999) explored in depth the phenomenon known as Theory of Mind (henceforth ToM), which Premack & Woodruff (1978) defined as an individual's ability to attribute the thoughts, mental states, states of knowledge, attitudes and beliefs to her interlocutor. Their studies showed that HFA/AS subjects performed significantly less well than neurotypicals on tasks requiring ToM ability. The connection with pragmatics is especially clear when looking at Sperber & Wilson's Relevance Theory (1986, 1995), which claims that for the interlocutor to obtain the optimal relevance of a message, whether verbal or otherwise, making correct inferences about the interlocutor's communicative intention is crucial. One key aspect of Relevance Theory is that not all inferencing targets the speaker's general state of mind. Understanding also requires inferencing related to fleshing out the speaker's basic proposition, e.g., enriching or recovering the basic idea behind elliptical utterances, determining referents, resolving ambiguity, and other pragmatic tasks which add, in accordance with the communicative principle of relevance, information to the often semantically under-determined literal, purely code-based utterance. Sperber & Wilson call such assumptions **explicatures** because they allow the listener to pass from a bare-bones proposition to a fully enriched one which has a truth-value. De Villiers et al. (2010) shows that HFA/AS interlocutors rarely have problems with such pragmatic tasks. The challenges arise much more with what Sperber and Wilson term **implicatures.** These are less code-dependent than explicatures, because they give rise to additional propositions that may have nothing to do with the basic proposition structurally or lexically but are crucial to a wider interpretation of it. Implicatures typically crop up in metaphor, irony, false-beliefs, and deception, areas where individuals with HFA/AS exhibit the greatest comprehension difficulty (Happé 1993).

2. RECOGNITION OF PRAGMATIC CONCEPTS. Dennis et al. (2001) presents hypotheses about how high-functioning ASD children handle a variety of tasks that require inferencing. The main hypotheses are:

1. Purportedly non-inferential language tasks like vocabulary comprehension and ambiguity resolution will pose less of a challenge than inferential tasks such as processing of metaphor, irony, and speech acts.
2. For mental state verbs, those carrying a presupposition about their complement (e.g.,

factives like *know*) would manifest higher scores than those involving implication about the complement (e.g., *manage*). Dennis et al. attribute the difference to the fixed knowledge required of presupposition, as opposed to the importance of context when processing implication.

3. Patients will manifest even greater deficits when handling social script-based inferencing, figurative language, and speech acts.
4. The level of inferencing difficulty is related to inferential demands characterizing each task (Sperber & Wilson 1995). Thus, what Dennis et al. characterize as non-inferential tasks are less demanding than inferential ones, mental state presupposition less so than implication, ambiguity less so than figurative language, which requires a greater degree of guessing the interlocutor's intention, and social scripts less so than speech acts (the latter require awareness of speaker intention, while the former rely more on learned knowledge).

Each of these hypotheses calls for comments on how it integrates pragmatics.

Hypothesis 1 (inferential > non-inferential) would appear to be the most straightforward of the four. Yet, to treat competence in vocabulary processing and ambiguity handling as categorically non-inferential is to overlook certain pragmatic realities. It is a truism that attention to the wider linguistic or situational context usually resolves polysemy, homonymy, and ambiguity, but mere attention is never enough. Clearly, some kind of quick reasoning, often barely conscious, must follow the perception of the contextual clue, and such reasoning shows affinities with more demanding inferential tasks. For instance, referent assignment can be potentially ambiguous, as in *When John dropped a vase, Jake said he was a klutz.* The connection between *John* and *he* is not a mere syntactic coupling: it involves applying one's semantic knowledge of *klutz* to the contextual clue *dropped a vase*, with the resulting inference choosing *John* over the syntactically possible *Jake* as antecedent for the pronoun.

Hypothesis 2 predicts that presuppositional constructions such as *John didn't know Henry was sick* are less inferentially demanding than implicatives. As shown in Karttunen (1971), implicative verbs may impose their polarity on the embedded verb. With two-way implicatives like *She managed to shut the door*, the polarity of the embedded complement matches the polarity of the matrix verb—i.e., if *managed* is negative, so is *shut the door*. With one-way implicatives, the polarity of the complement matches only the affirmative or only the negative of the matrix verb—e.g., *John forced Jim to subscribe* would imply that Jim subscribed if *forced* is affirmative but if it is negative, as in *John didn't force Jim to subscribe,* the polarity of the complement is uncertain. The reverse holds with implicatives like *hesitate,* where the complement verb's polarity is guaranteed only if the matrix verb is negative. If it is affirmative, the complement's polarity is again left open.

Dennis et al. associate presupposition with given knowledge, while implication is claimed to trigger inferences which produce new information. But in *She didn't manage to land a job*, the implication *She didn't land a job* is not totally new: her failure to do so is conveyed by the negative form of *manage*. Conversely, the presupposition in *I knew she landed a job* is not necessarily hearer-old information. Arguably, just as the complement of a factive presupposition verb is presupposed to be true or false, the polarity of an implicative verb's complement likewise is triggered by the preceding implicative verb. We realize one could debate whether we are really dealing with old information: is information learned milliseconds ago really *old*? Our claim is that both presuppositional and implicative structures convey information about their complement's polarity in exactly the same way. In both cases, the codal semantics of the triggering verb

determines presupposition, implication, or the lack thereof. This factor argues against implication being a totally pragmatic, context-dependent, invariably new-information phenomenon.

Compared to factives, where the truth value of the complement holds constant, implicatives present a far more complex picture. This does not have to mean that implicatives are **inferentially** more demanding. Karttunen's nuanced characterization of one- and two-way implicatives has nothing to do with pragmatics, i.e., the context does not determine whether a given implicative's complement has a certain polarity. Just as with factive presuppositional verbs, it would seem to be a matter of each implicative verb's invariant semantic properties. Indeed, high-functioning individuals with ASD typically do not have a great deal of semantic impairment, if any. As we shall see in the discussion of results, the ASD subjects did not display a large difference between their presupposition and implicative scores.

Hypothesis 3 pertains to social scripts, figurative language, and speech acts. The latter two often involve lexicalisation or short-circuited implicature (Morgan 1978). Again inference is not always the whole story: fixed knowledge is available to decipher some figurative language. Often dead or quasi-dead metaphors and some indirect speech acts like *Can you pass the salt?* may be frequent enough for the listener to skip the available inferential steps, interpreting the utterance instantaneously as a request. Social scripts are the one of these three phenomena that normally require inferencing, especially when there is a deviation from the expected course of events. Even so, the very word *scripts* suggests an interplay between well-established knowledge frames and our inferencing ability to handle unexpected variations.

Hypothesis 4 (comparison of task difficulty): The results, according to Dennis et al. confirm their hypotheses about differences in processing difficulty among the tasks. Let us first look at Figure 1, which reproduces their graph of size effects, based on the *d* calculation from Cohen (1977):

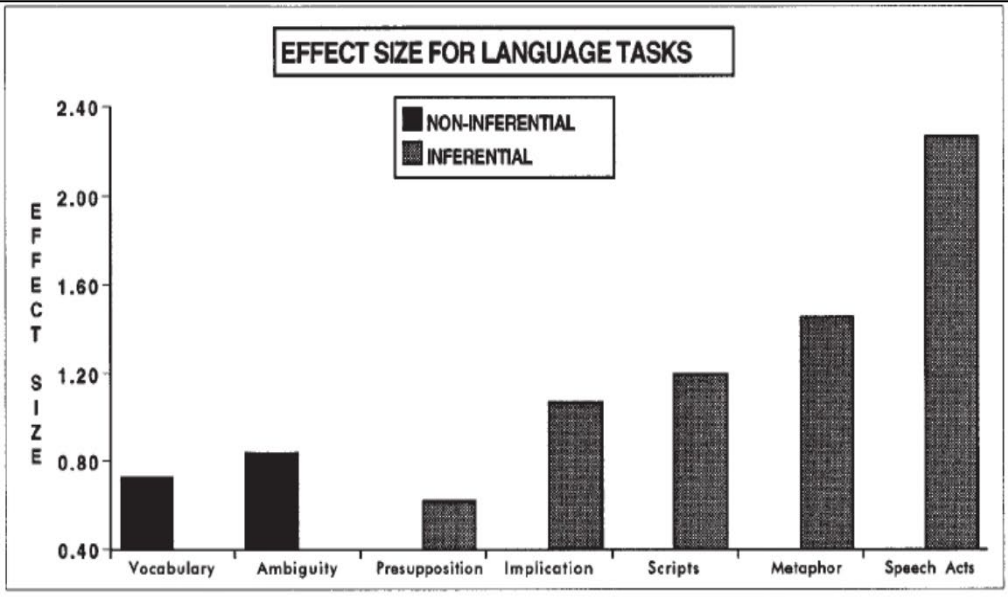

Fig. 1. Effect sizes for noninferential and inferential language tasks. Greater effect sizes indicate a larger difference between the High-function Autism/Asperger group and control group.

Figure 1 Effect Size for Language Tasks from Dennis et al. (2001, 52)

The point to notice here is that the purportedly noninferential tasks, Vocabulary and Ambiguity, show smaller effect size differences than the inferential tasks. Let us look at the actual results, given in **Table 1**:

Table I. Comparison of the High-Function Autism/Asperger Group and Controls

	High-function autism		Control	
	M	*SD*	*M*	*SD*
Noninferential tasks				
Vocabulary[a]	42.6	32.8	62.0	18.5
Ambiguity[a]	25.2	31.9	50.5	28.4
Inferential tasks				
Presupposition[b]	0.7	0.2	0.8	0.1
Implication[b]	0.6	0.2	0.8	0.1
Scripts[a]	20.8	25.2	51.5	25.8
Metaphor[a]	20.4	35.5	63.0	21.1
Speech acts[a]	20.0	20.7	69.2	22.7

[a] Age percentiles.
[b] Proportion of correct responses.

Table I: Comparison of the High-Function Autism/Asperger Group and Controls, from Dennis et al. (2001, 51)

We note some discrepancies when trying to reconcile **Figure 1** and **Table 1**. Consider first the scores for Presupposition and Implication. The differences between the participants with autism and the neurotypical controls on these two tasks appear, impressionistically, to be much smaller than shown in the Effect Size graph. A psycholinguist colleague[1] pointed out that the real problem is that all the other tasks have their results shown as age percentiles, rather than raw scores, as with Presupposition and Implication. Because Dennis et al. used this transformed scale, when the measures expressed as age percentiles are subjected to the effect size calculation, the results are uninterpretable and therefore meaningless. Thus, the authors have failed to support their hypothesis regarding the inferential/noninferential divide. Nor have they shown there is any significant difference between tasks which Sperber & Wilson (1995) would associate with explicature (e.g., Vocabulary and Ambiguity) and tasks that they would link to implicature (e.g., Metaphor and Speech acts). De Villiers et al. (2010) consider the former tasks to be much easier for ASD subjects to process than the latter.

Another article on point is Langdon et al. (2002), which deals largely with schizophrenia but claims that autism manifests similar deficits with regards to ToM. For our purposes, their comments on metaphor especially deserve scrutiny. Comparing the processing complexity of metaphor and irony, they conclude that metaphor is more demanding, because it entails a greater number of choices between loose talk (*Holland is flat*), clichés (*This room is a pigsty*) and creative metaphors (*Bobby is a bowl of Rice Krispies*). However, most metaphors are routinized or dead—

[1] Karin Humphries, personal communication

cf. Lakoff & Johnson (1980). A misinterpretation of a nominal metaphor like *pigsty* would lead to an incorrect fleshing out of the speaker's basic proposition, i.e., the inference would be based on explicature, not implicature, which poses the greater inferential challenge to ASD subjects. Sentential and creative metaphors are the only instances where processing metaphor may be as challenging as processing irony, or at times more challenging. Compared to loose talk and well-worn metaphors, irony poses greater processing difficulty because it invariably requires sensitivity to the immediate cognitive state of the other communicator, i.e., irony always involves pragmatics (in the sense of realizing the speaker's attitude) whereas not all metaphors do. Sperber & Wilson (2004: 619) show that speakers routinely jump right to the figurative sense of a dead metaphor, ignoring the literal sense and bypassing the need for inference. Happé (1993) shows that irony and metaphor require different ToM capabilities: metaphor can be interpreted well with either first or second order ToM while irony can be interpreted only with second order ToM (inferences about someone's belief about another's belief). From this standpoint, irony is clearly the more cognitively demanding of the two.

3. OVERGENERALIZATION. There are two issues that figure prominently in the linguistics literature on pragmatic difficulties in ASDs, as compared to the literature on ASDs in the behavioural sciences or in developmental psychology. These issues are the makeup of ASD participant groups, including the lack of clinical specifics in the diagnostic criteria used, and the overgeneralization of results from participants at one side of the autism spectrum to the entire autism spectrum.

Clinically, there are mainly three ASDs that are studied for their pragmatic impairments: autism, Asperger's syndrome (AS) and pervasive developmental disorder-not otherwise specified (PDD-NOS). These disorders are qualified in both the *International Classification of Diseases – Tenth Edition* (ICD-10) and the *Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition, Text Revision* (DSM-IV-TR) with diagnostic criteria and the differences in symptomatology between them. Individuals with autism have delayed acquisition of language and up to 30% of those diagnosed with autism are non-speaking. Also, up to 70% of those diagnosed with autism have an intellectual disability. Those with AS have few to none of the developmental delays found in autism but have the same performative language difficulties, as well as having those same difficulties with social situations and general motor clumsiness, all combined with average to above-average intelligence (Klin 2006: 6-7). Individuals with PDD-NOS, sometimes called 'atypical autism', are those who meet the criteria for autism with regards to social interaction and verbal and nonverbal communication skills but do not have enough criteria to be diagnosed with another form of pervasive developmental disorder. These individuals could also be diagnosed as PDD-NOS because of "a late age of onset, atypical symptomatology, or subthreshold symptomatology, or all of these" (American Psychiatric Association 2000: 84). In the more recent *Diagnostic and Statistical Manual for Mental Disorders – Fifth Edition* (DSM-5), these three diagnoses have been collapsed into one diagnosis, autism spectrum disorder (American Psychiatric Association 2013:50). There is also another diagnosis, social communication disorder (American Psychiatric Association 2013: 47), that can be used for individuals who have social and pragmatic language difficulties but not enough behavioural symptoms to qualify for an autism spectrum disorder diagnosis. Due to the fact that the DSM-5 has only recently been released, these new diagnostic criteria have not been widely used by language researchers, at the time of writing. Rather than focusing on an individual form of ASD when studying pragmatic difficulties, linguists frequently group their participants in terms of their level of social and communicative functioning, from high-functioning (AS and some PDD-NOS) to low-functioning (autism and some PDD-

NOS). Part of the reasoning behind this is due to pragmatic difficulties being common across the autism spectrum. Also, those with low-functioning forms of ASD may have structural language delays that may further affect their performance with regard to any activities for eliciting pragmatic structures or behaviour. Therefore, high-functioning individuals are usually sought for studying these aspects of language in the ASD population. Since the DSM-IV was first released in 1994, a new label, not found in the diagnostic manuals, has found a significant amount of use in the research literature, and that is *high-functioning autism* (HFA). HFA consists of individuals with Autism without mental retardation[2] and usually with no language delay (Klin 2006: 4). This label overlaps the diagnoses of AS and PDD-NOS. In fact, there is a current debate on whether AS and HFA are different and if so, how (Klin 2006). The issue that arises with using HFA participants in these sorts of linguistic studies is that it is not a specific clinical diagnosis and there is no standard profile in the diagnostic materials for this and thus there can be wide variation. This concern is also present in PDD-NOS, as it can be seen as a catch-all category in terms of diagnosis, but it is importantly distinct from AS and autism while HFA blurs these distinctions.

In Noveck et al.'s (2007) study investigating the interaction between negation and quantifier scope in neurotypical adults and children and adolescents with ASD, the authors claim to be using "verbally competent autistic participants" (2007: 77) and includes the following specification: "We do not use the expression Asperger's because the French system does not use the same diagnostic criteria as found elsewhere. However, as will be seen by their responses to control problems, the autistic participants are verbal, high functioning teenagers." (Noveck et al. 2007: 77). They do not specify what diagnosis under the French system they may meet but they do provide a little more information about the participants: the mean chronological age of the autistic participants was 16;3 while the mean mental age was 8;9 and the total average IQ was 53.94. Based on this information, these participants would also meet the criteria for mild to moderate mental retardation in the DSM-IV-TR (American Psychiatric Association 2000: 42)[3] and also in the ICD-10 (World Health Organization 1993: 140), which would exclude them from being considered high-functioning, according to Klin (2006: 4), or having Asperger's, according to both the American Psychiatric Association (2000: 84) and the World Health Organization (1993: 153). This creates an issue whereby results which were presumably meant to generalize the abilities of high-functioning individuals with ASDs are not necessarily representative of that population, because the population tested were low-functioning individuals with ASD.

One way to address this sort of issue is to reinforce the participant selection criteria to include other objective diagnostic scales. One example of this is found in Dennis et al.'s (2001) work on inferential language skills in high-functioning individuals with ASD. In this study, the researchers recruited eight children with AS or HFA but they also had objective criteria to accompany that diagnosis for inclusion. In this case, they also required the children be rated using the Childhood Autism Rating Scale. Since they did not specify what score the children had to achieve to warrant inclusion or exclusion from this study (Dennis et al. 2001: 48-49), it is very difficult to tell how consistent the members of their HFA/AS group would be in terms of performance.

These sorts of issues have been noted lately in the literature. The heterogeneity of the presentations and symptomatology of individuals with high-functioning forms of ASD creates the need for very specific participant selection criteria for investigations. Otherwise, the results may

[2] In the DSM-5, mental retardation is now referred to as intellectual disability or intellectual developmental disorder (American Psychiatric Association 2013: 33).

[3] In the DSM-5, an intellectual disability diagnosis is no longer based on IQ score but instead on functional criteria (American Psychiatric Association 2013:33).

be overgeneralised to those on the spectrum that the data do not represent (Surian & Seigal 2007). This would in turn involve use of more diagnostic tools and careful screening in the participant recruitment stages of future research.

4. DEFICIT MODEL. In the DSM-IV-TR, ASDs are clinically defined as pervasive developmental disorders, a group of disorders "characterized by severe and pervasive impairment in several areas of development: reciprocal social interaction skills, communication skills, or the presence of stereotyped behavior, interests, and activities" (American Psychiatric Association 2000: 69). In the DSM-5, the main diagnostic features of ASD are "persistent impairment in reciprocal social communication and social interaction, and restricted, repetitive patterns of behavior, interests, or activities" (American Psychiatric Association 2013:53). In the linguistics literature on the communicative difficulties faced by those with ASD, they are frequently described in terms of how they compare in communicative performance to an implicit neurotypical standard of communication. An example of this can be found in Noveck et al.'s (2007: 77) study: "critically, we add a third group that is known for having pragmatic deficiencies: verbally competent autistic participants." This creates a deficit model wherein individuals with ASDs are being compared to neurotypical individuals in terms of their communicative performance, leading to a conclusion that individuals with ASDs have *impairments*, *deficiencies* or *deficits* in certain areas of communication rather than merely differences. This model has appeared frequently in the linguistic research of the pragmatic differences observed in individuals with ASDs explicitly or implicitly. This can be seen in the actual lexical choices used by researchers. Papp (2006: 145) compares the development of ToM of individuals with autism to that of "normal children". ToM is traditionally seen as *impaired* in individuals with autism. Throughout her review of the ToM literature on autism, she refers to those without autism as being *normal*, which implies that people with autism must be *abnormal*. At first this comparison is not obvious but later in the article it becomes very explicit in one sentence with a direct comparison: "there is evidence that people with ASD choose contexts which derive very different cognitive effects for them from those that other *normal* people would obtain" (Papp 2006: 153). Harris et al. (2005: 69) also use the term *normal* in their investigation into how language affects the understanding of mental states in children, creating the same comparison: "Among normal children and children with autism, accuracy in the attribution of beliefs and emotions has been correlated with language skill." The use of the term *normal* in this literature further perpetuates the deficit model that is present, as the term *normal* is vague. It does not create a specific point of reference based in reality but creates a point of reference that is individualized to the reader and to society and that presupposes a single social standard up to which people with autism do not measure.

Implicitly, the deficit model can be seen as well in the same bank of literature on ToM and ASD. Rutherford et al. (2002) conducted a study to determine whether individuals with high-functioning forms of ASD could determine the emotional content behind a statement just by listening to voice samples. The participants, all with a diagnosis of HFA or AS, were given both a recording of forty statements as well as an answer sheet with two possible emotions, one of which would describe the emotional context of the recorded statement and one that would not. For example, Rutherford et al. (2002) played a recording of a person speaking the phrase "No, I honestly do" with an intonation pattern thought to indicate that the speaker was being earnest. The participants were then given the words *earnest* and *alarmed*. The participant would then have to choose which emotion word described how they thought the person in the recording intended the phrase (Rutherford et al. 2002:190-92). This group along with two other groups (a college-

educated neurotypical control and a non-college-educated neurotypical control) were administered this task. Looking at the results, we note that the college-educated control group performed extremely well and almost always better than both the ASD group and the non-college-educated control group (Rutherford et al. 2002: 189-91). The issue with this, however, is that it is not stated whether the members of the ASD group were ever college educated. The data are presented such that the college-educated results are listed between the ASD and non-college-educated group results (Rutherford et al. 2002: 192). This comparison may not be a fair one. When the reader reads the results from left to right, the results go from ASD group to college group to non-college group. It would seem to be more appropriate and more telling to omit the college control group altogether, as comparing that group to the ASD and non-college groups when educational level is not being investigated seems irrelevant. In some cases, the results for the college group were much higher than both of the other groups, while the other two groups were similar, as in the case of trying to determine hateful speech as either hateful or irritated. The success rate was just over chance for the ASD and non-college groups (53% and 55%, respectively) but the college-educated group selected the right emotion 78% of the time (Rutherford et al. 2002: 192). This shows that individuals with ASDs, who possibly had no college education, performed similarly to neurotypicals who had a comparable level of education. For that reason, having the college controls listed as the middle column of the results implicitly encourages the deficit model, since the college control performed better on 33 out of the 40 stimuli (Rutherford et al. 2002: 192). Also, when reading from left-to-right, the reader is implicitly encouraged to compare the ASD results to the college controls and then the college controls to the non-college controls. This also supports the inference that it would be preferable to list the ASD group results next to those of the non-college control group or to omit the college control group results entirely.

There is some awareness of these issues, however, in the research community. Joseph et al. (2002) argued that one of the major limitations on the analyses of cognitive profiles in those with autism is that

> emphasis on identifying a prototypical cognitive profile has been at the expense of considering the possibility of more than one cognitive profile in autism. At a conceptual level, recent advances in genetics and the understanding of autism as a complex disorder allow for the possibility of genetically meaningful variation in the cognitive phenotype of autism, which could potentially account for variation in the behavioural expression of autism. Yet, little attention has been paid to individual differences in cognitive profiles in autism (Joseph et al. 2002: 808).

De Villiers et al. (2007) investigated which pragmatic abilities were present in individuals with ASD rather than pragmatic deficits and used this information to propose a theory of treating the semantic-pragmatic boundary. Getting away from the deficit model when looking at the language abilities of individuals with ASD is essential to future research and some studies have moved in that direction. New language is being used to address some of the presuppositions involved in the term *normal*, including *normally-developing* (Surian et al. 1996; Klin, 2006) and *neurotypical* (de Villiers et al. 2007), both of which do not perpetuate viewing pragmatic differences in the ASD population in terms of a deficit model. Rather, these terms refer to a specific clinical aspect of the ASD profile: development, which differs from what is known about the development of the majority of the population, rather than creating a comparison to an abstract societal sense of a standard.

5. BARRIERS. Noveck et al.'s (2007) study is a follow-up of Musolino et al. (2000) , which explores

why children differ from adults in preferring quantifier scope readings that are in sync with the surface structure of the negation. Noveck et al. investigate the interpretation of the universal quantifier as subject of sentences containing negation, as in the French equivalent of *All the children are not in the pool*. They found that neurotypical children and ASD subjects preferred a wide-scope reading, i.e., *What we are saying about all the children is that they are not in the pool*, meaning that none are. Neurotypical adults, however, accepted only narrow scope, i.e., *not-all*, which applies *not* to an element that is not in its scope in terms of surface syntax, implying that some children are in the pool. Even high-functioning Asperger's subjects show a preference for the wide-scope reading. While the narrow-scope construal indeed seems to be the default among neurotypical adults, marked situations like the following are possible.

If someone accidentally put an overdose of chlorine in the pool, after a few minutes one can expect the announcement *All children must be out of the pool now*, i.e., an affirmative. However, in this context we can also envisage someone declaring *All children must not be in the pool now*, where the situational context clearly favours wide-scope negation, i.e., 'no children' Note also that changing the negation to *no longer* improves acceptability of the wide-scope reading, as in *All children must no longer be in the pool,* though a narrow-scope construal is still possible: *All children must no longer be in the pool but some still are* sounds acceptable, provided the sense of *must* is one of obligation rather than being epistemic.

To see whether we could replicate the results of Musolino et al. (2000) and Noveck et al. (2007) regarding adult neurotypical preference for narrow-scope negation with quantifiers, we conducted a small poll using Facebook. One author posted an English translation of the sentence from the study, and asked people what the most salient reading was to them. The results were mixed. Twelve neurotypical adults responded and those that were in linguistics, cognitive science or philosophy university programs (six individuals), responded that they found the wide-scope reading to be the most salient. The other six individuals found the narrow-scope reading to be the most likely. This impromptu poll suggests that the scope of negation could vary more than the results of the study would suggest.

6**.** CONCLUSION. We have pointed out several problems in the literature on the pragmatic difficulties faced by those with ASD. There has been, at times, a lack of recognition of key linguistic and pragmatic distinctions in the analysis of these purported *deficits*, with results sometimes being distorted because they are from inappropriately mixed participants along the extensive autism spectrum, as when HFA subjects had their scores blended with those having AS or where purportedly high-functioning participants were actually not. Secondly, a deficit model has been used to describe the linguistic symptomatology in ASD, and finally, barriers have been created to separate the abilities of neurotypicals from those with ASD. Especially in the case of those individuals with ASD that are high-functioning, these barriers may not be as rigid as previously believed and may in fact be quite fuzzy, if they exist at all. These supposed lines in the sand, still taken for granted in some of the current research, serve to further limit the status of individuals with ASD, to distance them from neurotypicals and to emphasize what those with ASD cannot do. We acknowledge that these issues are not rampant and there is fortunately increasing awareness of these circumstances in the research community at large. Hopefully this awareness will continue to grow and help create a larger, more reliable research base from which to work in the future.

POSTSCRIPT:

This article was written in 2011 and accepted for publication in 2012, with slight updates in 2013. At the time the article was written, the language that we, the authors, used was common in our fields of research. However, since the article was written, the language preferences of Autistic people have entered the public consciousness and we recognize that some of the language we used could be viewed as problematic, including using person-first language and using functioning labels to describe Autistic people. We acknowledge that some of the language used in this article may not align with current standards and preferences of the Autistic community. While it reflects the norms of its time, we value the opportunity to reflect on and adapt to evolving practices. We hope this context provides clarity and we acknowledge the preferences and experiences of the Autistic community today and commit to do better.

REFERENCES

AMERICAN PSYCHIATRIC ASSOCIATION. 2000. *Diagnostic and statistical manual of mental disorders*. Fourth Edition, Text Revision. Washington DC: American Psychiatric Association.

AMERICAN PSYCHIATRIC ASSOCIATION. 2013. *Diagnostic and statistical manual of mental disorders*. Fifth Edition. Arlington, Va: American Psychiatric Association.

BARON-COHEN, SIMON, ALAN M. LESLIE, & UTA FRITH. 1985. Does the autistic child have a "theory of mind"? *Cognition* 21: 37-46.

BARON-COHEN, SIMON, MICHELLE O'RIORDAN, VALERIE STONE, ROSIE JONES, & KATE PLAISTED. 1999. Recognition of faux pas by normally developing children and children with asperger syndrome or high-functioning autism. *Journal of autism and developmental disorders*. 29 (5): 407-18.

COHEN, JACOB. 1977. *Statistical power analysis for the behavioral sciences* (Revised ed.). New York: Academic Press.

DE VILLIERS, JESSICA, ROBERT STAINTON, & PETER SZATMARI. 2007. Pragmatic abilities in autism spectrum disorder: A case study in philosophy and the empirical. *Midwest Studies in Philosophy* 30 (1), 292-317.

DE VILLIERS, JESSICA, BROOKE MYERS, & ROBERT J. STAINTON. 2010. Differential pragmatic abilities and autism spectrum disorders: The case of pragmatic determinants of literal content. *Pragmatics and context*. Ed. by M. Macaulay and P. Garces-Blitvich. Toronto: Antares.

DENNIS, MAUREEN, ANNE L. LAZENBY, & LINDA LOCKYER. 2001. Inferential language in high-function children with autism. *Journal of autism and developmental disorders* 31 (1): 47-54.

FRITH, UTA, & FRANCESCA HAPPÉ. 1999. Theory of mind and self-consciousness: What is it like to be autistic? *Mind & language* 14 (1): 1-22.

HAPPÉ, FRANCESCA. 1993. Communicative competence and theory of mind in autism: A test of relevance theory. *Cognition* 48: 101-19.

HARRIS, PAUL L., MARC DE ROSNAY, & FRANCISCO PONS. 2005. Language and children's understanding of mental states. *Current directions in psychological science* 14 (2): 69-73.

JOSEPH, ROBERT M., HELEN TAGER-FLUSBERG, & CATHERINE LORD. 2002. Cognitive profiles and social-communicative functioning in children with autism spectrum disorder. *Journal of child psychology and psychiatry* 43 (6): 807-21.

KARTTUNEN, LAURI. 1971. Implicative verbs. *Language* 47 (2): 340-58.

KLIN, AMI. 2006. Autism and asperger syndrome: an overview. *Revista Brasileira de psiquiatria* 28 (suppl.1): s3-s11.

LAKOFF, GEORGE, & MARK JOHNSON. 1980. *Metaphors we live by*. Chicago: University of Chicago Press.

LANGDON, ROBYN, MARTIN DAVIES, & MAX COLTHEART. 2002. Understanding minds and understanding communicated meanings in schizophrenia. *Mind & language* 17: 68-104.

MORGAN, JERRY. 1978. Two types of convention in indirect speech acts. *Syntax and Semantics 9: Pragmatics*, ed. by Peter Cole: 261-80. New York: Academic Press.

MUSOLINO, JULIEN, STEPHEN CRAIN, & ROSALIND THORNTON. 2000. Navigating negative quantificational space. *Linguistics* 38 (1): 1-32.

NOVECK, IRA A., RAPHAËLE GUELMINGER, NICOLAS GEORGIEFF, & NELLY LABRUYERE. 2007. What autism can reveal about every … not sentences. *Journal of semantics* 24: 73-90.

PAPP, SZILVIA. 2006. A relevance-theoretic account of the development and deficits of theory of mind in normally developing children and individuals with autism. *Theory & psychology* 16 (2): 141-61.

PREMACK, DAVID, & GUY WOODRUFF. 1978. Does the chimpanzee have a theory of mind? *Behavioral and brain sciences* 1 (4): 515-26.

RUTHERFORD, M. D., SIMON BARON-COHEN, & SALLY WHEELWRIGHT. 2002. Reading the mind in the voice: A study with normal adults and adults with asperger syndrome and high functioning autism. *Journal of autism and developmental disorders* 31 (3): 189-194.

SPERBER, DAN, & DEIRDRE WILSON. 1986 and 1995 (second edition). *Relevance: Communication and Cognition*. Oxford: Blackwell.

SPERBER, DAN & DEIRDRE WILSON. 2004. Relevance theory. In *Handbook of Pragmatics*, ed. by G. Ward and L. Horn, 607-32. Oxford: Blackwell.

SURIAN, LUCA, SIMON BARON-COHEN & HEATHER VAN DER LELY. 1996. Are children with autism deaf to Gricean maxims? *Cognitive neuropsychiatry* 1 (1): 55-71.

SURIAN, LUCA & MICHAEL SEIGAL. 2007. Language and communication disorders in autism and asperger syndrome. In *Handbook of the Neuroscience of Language*, ed. by Brigitte Stemmer and Harry A. Whitaker, 377-86. London, UK: Elsevier.

WORLD HEALTH ORGANIZATION. 1993. *The ICD-10 classification of mental and behavioural disorders: Diagnostic criteria for research*. Reprinted in 2003. Malta: World Health Organization.

This article was first published at www.lacussquare.org.

LACUS Forum **39:2.34-47 (2025)**

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'J'apprécie ce compliment. Ça signifie beaucoup à moi d'entendre ça.'

RÉPONDRE À LA POLITESSE EN INTERLANGUE FRANÇAISE: UNE PERSPECTIVE CANADIENNE

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Résumé. Cette étude a pour objet la compétence pragmatique en français langue seconde d'un groupe d'apprenants Canadiens anglophones. Elle montre de quelle manière les apprenants testés répondent aux compliments en français langue seconde et met en lumière quelques différences et similitudes par rapport aux types, fréquences et formes de réalisation des réponses aux compliments en français L1 et L2. L'analyse s'intéresse aussi à l'impact de la langue source des apprenants (l'anglais) sur les stratégies employées en français L2. Au-delà des similitudes relatives aux types d'actes de langage mobilisés dans la réalisation des réponses aux compliments en français L1 et L2, l'analyse révèle des différences significatives au niveau des formes de réalisation et des valeurs socio-affectives des stratégies attestées. On observe par exemple que les apprenants utilisent des structures plus longues, complexes, variées et expressives que celles des locuteurs natifs francophones. Et cette différence résulte, dans certains cas, des transferts de type linguistique, pragmatique et culturel. Les données ont été recueillies auprès d'un groupe d'apprenants du français langue seconde, d'un groupe de locuteurs natifs de l'anglais et d'un groupe de locuteurs natifs francophones.

Mots-clés : *Compétence pragmatique, français L2, politesse, réponses aux compliments, transferts culturels*

LES RÉFLEXIOINS SUR L'IMPORTANCE E LES FACETTES de la compétence pragmatique dans l'apprentissage des langues se sont multipliées ces dernières années. Cet intérêt croissant, motivé surtout par le souci d'explorer les mécanismes susceptibles de développer la compétence pragmatique des apprenants, a prévalu à la naissance d'un champ de recherche, la Pragmatique de l'interlangue (PIL), qui se trouve au croisement de la didactique des langues et de la pragmatique. Née des travaux pionniers de Kasper (1998: 184), la pragmatique de l'interlangue se définit comme l'étude de la compréhension, de l'emploi et du processus d'acquisition des actes de langage en langues étrangères / secondes par des locuteurs. La PIL analyse la manière dont les apprenants utilisent la langue cible, l'interlangue, pour assouvir leurs besoins communicatifs. D'après Zhihong (2009 : 111), « l'interlangue désigne un état de système transitoire de la langue dans

l'apprentissage, caractérisé par des traits de la langue cible, de la langue maternelle et/ou des autres langues acquises antérieurement. » La présente étude se penche sur la compétence pragmatique en français langue seconde d'un groupe d'apprenants canadiens anglophones. Elle s'intéresse tout particulièrement aux manières dont les apprenants à l'étude répondent (en français L2) à la politesse manifestée à leur égard. Plus précisément, il s'agira de voir qu'elles sont les différences et similitudes en rapport avec les réponses aux compliments en français L1 et L2 et de voir quel est l'impact de la langue source, l'anglais, sur les stratégies employées par les apprenants testés.

Après avoir brièvement présenté l'acte de langage à l'étude (section 1), la revue d'un certain nombre d'études consacrées aux actes de langage en langues étrangères/secondes (section 2), et les questions de recherche (section 3), nous donnerons un aperçu de la méthodologie utilisée (section 4). Les résultats de nos analyses seront présentés et discutés dans la cinquième partie. La conclusion, dans la sixième partie, se penchera sur quelques implications / suggestions pédagogiques de l'étude.

1. LES RÉPONSES AU COMPLIMENT. La réponse au compliment est la deuxième composante de l'échange complimenteur, produite en réaction au compliment. Selon Kerbrat-Orecchioni (1998 : 202), le compliment se définit comme « toute assertion évaluative positive portant sur une qualité ou une propriété de l'allocutaire A (un compliment, c'est une louange adressée à la personne « concernée »), ou bien encore, sur une qualité ou propriété d'une personne plus ou moins étroitement liée à A. ». Le compliment est un «cadeau verbal» que le laudateur offre à son vis-à-vis pour négocier des rapports sociaux avec ce dernier. C'est un acte flatteur, au sens de Brown et Levinson (1987), ou un acte à valeur affective positive, selon Leech (1983). Dans certaines situations, toutefois, la valeur affective du compliment peut être négative. L'interprétation positive ou négative du compliment peut dépendre du contexte situationnel, des formulations, de l'objet du compliment, et/ou des variables sociales comme l'âge, le sexe et le statut social des interlocuteurs. Dans certaines situations, le récepteur peut interpréter l'évaluation positive comme une forme d'intrusion dans sa sphère privée ou comme une évaluation exagérée et/ou intéressée.

Cela revient à dire que la politesse manifestée au moyen du compliment peut donner lieu à divers types de réponses. La réaction peut être à valeur affective positive ou négative et les facteurs qui déterminent le choix, la fréquence, les formulations et les valeurs sociales de ces types de réponses sont multiples et varient d'une langue ou culture à une autre. Cette réalité pose souvent problème aux apprenants du français L2. En effet, ces derniers pourraient être confrontés à certaines difficultés relatives à la façon de répondre au compliment dans la langue cible et risqueraient d'utiliser plutôt les stratégies de la langue source pour assouvir leurs besoins communicatifs en français L2. Le transfert pragmatique qui en résulte peut alors donner lieu à des malentendus interculturels entre les locuteurs natifs et non-natifs du français. Il serait intéressant de voir si c'est le cas pour ce qui est du groupe d'apprenants que nous avons testés.

2. LES ACTES DE LANGAGE EN LANGUE ÉTRANGÉRE/SECONDE. Si, de manière générale, la plupart des études en pragmatique de l'interlangue portent sur l'anglais et la requête, le nombre de travaux sur d'autres langues (secondes) est de plus en plus croissant. On citera, entre autres : l'espagnol (Smith, 2009)[1], l'indonésien (Hassall, 2001 ; 2003)[2], l'allemand (Barron, 2003 ; Thaler, 2008),

[1] Qui analyse la production et l'acquisition des réponses au compliment par les apprenants de l'espagnol L2 aux États-Unis et les compare avec les réponses au compliment produites par les locuteurs natifs de l'espagnol et les locuteurs natifs de l'anglais.

[2] Qui analyse la réalisation des requêtes en Indonésien L2 par les apprenants australiens.

etc. En plus de l'acte de la requête, d'autres actes de langage et phénomènes pragmatiques ont été étudiés. Les travaux appartenant à la PIL française sont moins nombreux. Les études existantes portent sur la requête (Warga (2004 ; 2005), la requête et le remerciement (Viljamaa, 2012), la demande d'excuse (Warga et Schölmberger, 2007 ; Bellachhab et Rawashdeh, 2009, Edmonds, 2010), les marqueurs discursifs et connecteurs (Hancock, 2000 ; Pellet 2005), etc. Le compliment et les réponses au compliment ont été largement étudiés dans une perspective contrastive et interculturelle[3]. Cependant, les travaux sur ces deux actes en interlangue sont encore très peu nombreux. On peut citer: Nelson et. al (1995), qui proposent une analyse comparative des compliments par des étudiants égyptiens et américains et discutent de l'impact des différences observées sur l'enseignement de l'anglais et/ou de l'arabe langues secondes ; Smith (2009), dont la thèse de doctorat porte sur la réalisation et l'acquisition des réponses au compliment en espagnol L2 par des apprenants américains; Sharifian (2008), qui étudie les réalisations des réponses au compliment en anglais L2 par des apprenants persans, l'étude de Bu (2010) consacrée aux interférences pragmatiques dans les réponses au compliment des apprenants chinois de l'anglais.

Il y a très peu d'études comparatives des réalisations du compliment et des réponses aux compliments en français L1 et L2. Le travail de Wieland (1995), qui s'appuie sur des données produites par un groupe de locuteurs natifs francophones de France et un groupe d'apprenants américains du français, est l'unique étude que nous avons pu recenser. En ce qui concerne les types de compliments, l'auteure identifie plusieurs différences en français L1 et L2 et attribue celles-ci aux différences de perceptions du discours laudatif dans les espaces culturels français et américain (Wieland, 1995: 803). Il en est de même des réponses aux compliments : Wieland constate, en effet, que pendant que les Français acceptent rarement les compliments et préfèrent les réfuter ou relativiser / minimiser la valeur de l'objet complimenté (loi de modestie), les apprenants américains privilégient l'acceptation du compliment. Ce travail établit brillamment le lien entre les différences culturelles et les différences de comportements dans l'échange de compliments en français L1 et L2. Nous tenterons de poursuivre cette approche, en comparant les réponses aux compliments d'un groupe d'apprenants canadiens anglophones du français et d'un groupe de locuteurs natifs francophones au Québec.

Dans la section suivante, nous présenterons les questions de recherche et les données sur lesquelles se fondent nos analyses. Ensuite, nous procéderons à l'analyse des stratégies mises en œuvre par les apprenants du français en comparant ces données avec celles des locuteurs natifs de l'anglais et du français afin de mesurer l'impact des normes linguistiques et pragmatiques de la langue source sur les pratiques de la politesse en français langue seconde. Pour conclure, nous récapitulerons les résultats et présenterons quelques pistes pour la recherche à venir.

3. QUESTIONS DE RECHERCHE. Partant du fait que les différences culturelles ont un impact sur les types, fréquences et réalisations des réponses au compliment, nous tenterons de répondre aux questions suivantes. (1) Comment les apprenants testés réagissent-ils aux compliments en français L2? ; (2) Quelles sont les différences et similitudes en ce qui concerne les types de réponses, leurs fréquences et leurs réalisations en français L1 et L2? ; (3) Quel est l'impact de la langue-culture source des apprenants (l'anglais) sur leurs réactions aux compliments en français L2 ? Pour répondre à ces questions nous avons adopté la méthodologie présentée dans la section suivante.

[3] Voir la bibliographie sélective (Speech Acts Bibliography - Compliments / Responses). Disponible [En ligne] à : [http://www.carla.umn.edu/speechacts/bibliography/compliments.html]

4. MÉTHODOLOGIE.

4.1. LES PARTICIPANTS. Trois groupes de répondants ont participé à cette étude. Un groupe d'apprenants anglophones (n = 19, dont 16 de sexe féminin et 3 de sexe masculin) de français à l'Université Cape Breton, âgés de 18 à 22 ans. Ces derniers venaient des programmes d'immersion française au secondaire où ils ont passé en moyenne six ans. Ils étaient, pour la plupart, en première ou deuxième année universitaire. Il s'agit d'un groupe d'apprenants du niveau intermédiaire. Le deuxième groupe est celui de locuteurs natifs de l'anglais (n = 25, dont 22 de sexe féminin et 3 de sexe masculin), étudiants à l'Université Cape Breton et âgés de 18 à 26 ans[4]. Le troisième groupe est celui de locuteurs natifs de français (n = 10, dont 5 de sexe masculin et 5 de sexe féminin), vivant à Montréal, étudiants pour la plupart (7/10), et âgés de 22 à 40 ans.

4.2. LA COLLECTE DES DONNÉES. Les données ont été obtenues au moyen d'un questionnaire (*Discourse Completion Tests* [DCT]) que nous avons élaboré en version française et anglaise, contenant la description de 16 situations (huit pour le compliment et huit pour les réactions au compliment). La version française a été proposée aux apprenants de français et aux locuteurs natifs francophones et la version anglaise a été proposée aux locuteurs natifs anglophones, avec la consigne de se mettre dans chaque situation décrite et d'y répondre spontanément comme ils l'auraient fait dans une situation réelle. Nous avons tenu à varier les situations en fonction des facteurs comme la distance sociale ou le degré d'intimité entre les interlocuteurs, la distance hiérarchique ou le pouvoir social du complimenteur afin de voir l'impact de ces variables sur les types et les fréquences des réponses aux compliments. Nous avons obtenu 152 réponses des apprenants du français (AP), 200 réponses des locuteurs natifs d'anglais (NA) et 78 réponses des locuteurs natifs de français (NF).

5. RÉSULTATS ET DISCUSSION.

5.1. LONGUEUR ET COMPLEXITÉ DES RÉPONSES AU COMPLIMENT. Le premier volet de l'analyse consistait à examiner les réponses du point de vue de leur longueur et complexité, c'est-à-dire d'après le nombre d'énoncés contenus dans une seule réponse. Le but de cette démarche était de montrer si les trois groupes de participants manifestent un penchant pour des réponses concises ou simples, c'est-à-dire des réponses constituées d'un seul acte de langage comme le *remerciement* (ex. *Merci beaucoup d'avoir regardé ma nouvelle téléphone*. (S6, AP)), ou si ces derniers préfèrent des réponses plus élaborées ou complexes, c'est-à-dire des réponses résultant de la combinaison d'au moins deux actes de langage[5] comme la combinaison *remerciement* + *commentaire* + *encouragement* (ex. *Merci, c'était seulement soixante-dix dollars et vient dans d'autres couleurs*[6]. *Vous devriez acheter une*[7]. (S6, AP)).

Comme le montre le Tableau 1, le taux d'emploi des réponses simples est plus bas que celui des réponses complexes dans les trois groupes. Alors que la grande majorité des AP et des NA préfèrent de loin les réponses complexes, la différence entre les deux types de réponses n'est pas aussi marquée chez les NF. En plus, les NF utilisent nettement plus de réponses simples (41.02%)

[4] 15 participants de ce groupe faisaient partie du groupe d'apprenants de français L2 qui ont rempli la version française du questionnaire et cinq autres locuteurs natifs d'anglais ont indiqué être passés par le programme d'immersion française.
[5] Par acte de langage nous entendons ici tout énoncé pourvu d'une valeur illocutoire avérée.
[6] Représente le commentaire.
[7] Représente l'encouragement.

que les AP (11.84%). En matière de longueur des réponses le choix des AP tend à se rapprocher de celui des NA.

Tableau 1 : Distribution des réponses simples et des réponses complexes en nombres absolus et en pourcentages (AP : Apprenants du français ; NF : natifs francophones ; NA : natifs anglophones)

	AP	NA	NF
Réponses simples	18 (11.84%)	32 (16%)	32 (41.02%)
Réponses complexes	134 (88.16%)	168 (84%)	46 (58.98%)
Total	152 (100%)	200 (100%)	78 (100%)

En ce qui concerne les réponses complexes, les analyses révèlent la combinaison de deux, trois, quatre et cinq actes par les participants à l'étude (cf. Tableau 2), avec, toutefois des différences quant à la fréquence et les types de combinaisons effectuées. Comme le montre le Tableau 2, alors que les NF combinent uniquement deux ou trois actes dans leurs réponses, certains AP et NA mobilisent quatre ou cinq actes de langage dans une seule réponse. L'examen des différents types de combinaisons effectués montre que les AP ont utilisé 46 combinaisons différentes dans les 134 réponses complexes, les NA ont eu recours à 55 différents types de combinaisons dans les 168 réponses complexes attestées et les NF ont employé 16 combinaisons différentes dans les 46 réponses complexes produites. Les AP combinent les actes de langage nettement plus et varient les types de combinaisons plus que les locuteurs natifs francophones.

Tableau 2: Distribution des types de combinaisons dans les réponses complexes

	AP	NA	NF
Combinaisons de 2 actes	77 (57.46%)	114 (67.86%)	39 (84.78%)
Combinaisons de 3 actes	49 (36.57%)	48 (28.57%)	7 (15.22%)
Combinaisons de 4 actes	7 (5.22%)	5 (2.97%)	0
Combinaisons de 5 actes	1 (0.75%)	1 (0.60%)	0
Nombre de combinaisons effectuées*	46	55	16
Total	134 (100%)	168 (100%)	46 (100%)

*Il faut souligner que les totaux (134, 168, 46) excluent les réponses à un seul acte.

En outre, le Tableau 2 indique que les combinaisons de deux actes de langage sont les plus employées par les trois groupes, avec notamment une forte préférence pour les deux combinaisons suivantes: *remerciement* + *commentaire* (AP [n = 42 ou 31.34%] ; NA [n = 49 ou 29.17%] ; NF [n = 14 ou 30.43%]), comme dans les exemples (1) – (3) et *remerciement* + *remerciement* (AP [n = 10 ou 7.46%] ; NA [n = 11 ou 6.55%] ; NF [n = 6 ou 13.04%]), comme dans les exemples (4) – (6)

1) *Merci d'avoir aimé ma présentation. C'était beaucoup de travail alors c'est une bonne chose que quelqu'un a l'aimée.* (S2, AP)
2) *Merci, c`est tendance en ce moment*. (S6, NF)
3) *Thanks, it was worth it, spending so much time studying.* (S, NA)
4) *Merci, c'est gentil*. (S2, NF)
5) *Merci, c'est gentil de votre dit*. (S5, AP)
6) *Thank you, I appreciate that coming from you*. (S3, NA)

5.2. RÉPONSES AU COMPLIMENT EN STRATÉGIES DE POLITESSE. Nous avons aussi examiné les

réponses au compliment sous l'angle des stratégies ou maximes de politesse (Brown et Levinson, 1987 ; Leech 1983), c'est-à-dire du point de vue de leur impact sur les relations interpersonnelles. Il convient de rappeler brièvement que Brown et Levinson distinguent deux macro-types de politesse : (1) la politesse négative qui consiste à éviter les actes menaçants, les actes qui peuvent blesser la sensibilité, l'amour propre de l'autre ou menacer la liberté d'action de l'interlocuteur ; (2) la politesse positive qui consiste à produire des actes flatteurs, c'est-à-dire des actes susceptibles de valoriser la face (positive) de l'autre. Pour Leech (1983 : 132), la politesse s'énonce en six maximes : (1) maxime de tact : « *minimiser le coût et maximiser le bénéfice de l'autre* » ; (2) maxime de générosité : « *minimiser le bénéfice et maximiser le coût pour soi* » ; (3) maxime d'approbation : « *minimiser le déplaisir et maximiser le plaisir de l'autre* » ; (4) maxime de modestie : « *minimiser le plaisir et maximiser le déplaisir de soi* » ; (5) maxime d'accord : *« minimiser le désaccord et maximiser l'accord entre soi et l'autre* » ; (6) maxime de sympathie : « *minimiser l'antipathie et maximiser la sympathie entre soi et l'autre* ». Comme on peut le constater, l'allocutaire doit, conformément à ces maximes, être ménagé et le locuteur doit subir les coûts de ce ménagement.

5.2.1. RÉPONSES SIMPLES ET POLITESSE. L'analyse des actes de langage employés dans la réalisation des réponses simples révèle que les AP ont exclusivement recours au *remerciement* (n = 18), alors que les NA font usage du *remerciement* (n = 27), du *commentaire* (n = 3) (ex. *It is an old family recipe*. (S4, NA)), et de l'*accord* (n = 2) (ex. *Right on*. (S4, NA)). Les NF, par contre, utilisent le *remerciement* (n = 22), l'*accord* (n = 3) (ex. *Ouais il est bon*. (S4, NF)), le *déplacement* (n = 2) (ex. *C'est grâce à toi maman*. (S1, NF)), l'expression de la *joie* (n = 2) (ex. *Je suis contente*. (S1, NF)), l'*offre* (n = 2) (ex. *Ben je pourrais t'aider quand tu voudras*. (S2, NF)), et la *remise en question* / le *rejet* (n = 1) (ex. *Essayez-vous de me draguer ?*[8] (S5, NF)) (cf. Tableau 3). Si le remerciement est l'acte de prédilection dans les réponses en français L1 et L2, le choix des AP se limite au remerciement, alors que les NF utilisent, en plus du remerciement, quatre autres actes illocutoires.[9] Cette différence peut s'expliquer par le fait que les AP pensent que les autres réponses simples aux compliments (déplacement, demande de confirmation, minimisation) ne sont pas aussi polies que les remerciements. Ce serait la raison pour laquelle les autres types de réponses, qui s'utiliseraient seules en français L1, sont plutôt combinées à l'expression de la gratitude en français L2. Le choix des apprenants serait aussi dû à l'influence de leur langue-culture source, où l'acceptation du compliment (à travers le remerciement, *thank you*), est la réaction qui prime (cf. Homes, 1988 ; Herbert, 1989).

En regardant le Tableau 3 on constate que les actes les plus fréquents non seulement représentent des stratégies d'acceptation du « cadeau verbal » et d'approbation du bon jugement du complimenteur, mais ils servent aussi à valoriser la compétence sociale du complimenteur et à « fabriquer du contentement mutuel » (Kerbrat-Orrecchioni, 2005 : 143) dans l'interaction.

[8] Il s'agit d'un contexte dans lequel une jeune femme répond au compliment d'un jeune homme qu'elle considère envahissant.

[9] L'on pourrait parler de trois autres actes dans la mesure où l'expression de la joie fonctionne comme une forme indirecte du remerciement. Autrement dit, les frontières entre les actes de langage ne sont pas toujours étanches, de sorte qu'un énoncé peut incarner plus d'un seul acte.

Tableau 3 : Distribution des réponses simples en termes d'actes illocutoires

	AP	NA	NF
Remerciement	18 (100%)	27 (84.37%)	22 (68.75%)
Commentaire	0	3 (9.38%)	0
Accord	0	2 (6.25%)	3 (9.37%)
Déplacement	0	0	2 (6.25%)
Joie	0	0	2 (6.25%)
Offre	0	0	2 (6.25%)
Remise en question / rejet	0	0	1 (1.13%)
Total	18 (100%)	32 (100%)	32 (100%)

5.2.2. RÉPONSES COMPLEXES ET POLITESSE. Au niveau des combinaisons mises en jeu dans les réponses complexes, l'on peut aussi noter l'emploi d'actes à valeur affective positive. En effet, les participants des trois groupes combinent généralement le remerciement à d'autres types d'actes susceptibles de renforcer les liens sociaux. À tout prendre, l'expression de la gratitude est généralement renforcée ou atténuée au moyen d'autres types d'actes de langage et chaque combinaison effectuée réalise au moins l'une des stratégies de la politesse positive ou négative présentées par Brown et Levinson (1987) ou l'une des maximes de politesse énoncées par Leech (1983).

Les trois groupes de participants combinent le remerciement aux actes tels que le déplacement, la minimisation, et la demande de confirmation. A travers ces combinaisons les participants respectent la loi de modestie et évitent de blesser la sensibilité de l'autre lorsqu'ils acceptent le compliment. A travers le commentaire, les complimentés manifestent de l'intérêt envers leurs vis-à-vis et leur livrent des explications ou informations susceptibles d'aider ces derniers à en faire autant (maxime de tact). Le renvoi du compliment est une marque de réciprocité que l'on observe généralement dans les situations d'offre de cadeaux (maxime de générosité). En plus, en rendant la pareille, les récepteurs tentent de (re)focaliser l'attention sur l'autre (maxime de tact/modestie). Enfin, l'encouragement, le conseil et la suggestion ont pour fonction d'inciter le complimenteur à en faire autant. Les actes associés au remerciement fonctionnent comme des marques de sollicitude/générosité envers l'autre et servent à fabriquer du contentement mutuel. D'une manière générale, la stratégie de prédilection chez les AP, NA et NF est l'emploi d'actes à valeur relationnelle positive, c'est-à-dire le recours aux actes qui permettent au récepteur de valoriser la face positive ou négative du complimenteur ainsi que la sienne. En dehors de la réaction « Essayez-vous de me draguer ? » qui pourrait constituer une remise en question de la sincérité de l'autre, les réponses négatives telles que le désaccord et l'auto-éloge (Kerbrat-Orecchioni, 1998 : 240-249) n'apparaissent pas dans le corpus.

5.3. TYPES DE RÉPONSES LES PLUS EMPLOYÉS. S'agissant des stratégies employées dans les réponses des participants, nous avons noté que certains actes et certaines combinaisons d'actes sont plus sollicités que d'autres. Les cinq types de réponses les plus employés par les trois groupes de participants sont présentés dans le Tableau 4.

Tableau 4: Distribution des cinq types de réponses les plus employés

	AP	NA	NF
Remerciement + commentaire	42 (27.63%)	49 (24.50%)	14 (17.95%)
Remerciement	18 (11.84%)	27 (13.50%)	22 (28.20%)
Remerciement + remerciement	10 (6.58%)	11 (5.50%)	6 (7.69%)
Remerciement + déplacement	9 (5.92%)	11 (5.50%)	5 (6.41%)
Remerciement + commentaire + joie	9 (5.92%)	-	-
Remerciement + renvoi du compliment	-	-	4 (5.13%)
Remerciement + joie	-	11 (5.50%0)	-
Total	88 (57.89%)	98 (49%)	51 (65.38%)[10]

Les types de réponses les plus employés par les trois groupes combinent respectivement deux actes de langage. Quelques exemples du corpus sont : remerciement + commentaire (ex. *Merci, je travaille très fort pour ce bourse.* (S1, AP)), remerciement + déplacement (ex. *Merci beaucoup, mais c'est grâce à mes professeurs que j'ai réussi.* (S3, NF) ; *Merci beaucoup. C'est vous qui m'avez bien enseigné.* (S3, AP); *Thank you, also I had a great teacher*. (S3, NA)), remerciement + commentaire + joie (ex. *Merci, c'est une nouvelle téléphone, alors je suis contente que tu l'aime.* (S6, AP), remerciement + renvoi du compliment (ex. *Heu, merci! Les tiennes aussi.* (S7, NF), remerciement + joie (ex. *Ohh thanks, glad you liked it!* (S4, NA), remerciement + remerciement (ex. *Thank you, that means a lot to me.* (S3, NA); *Merci, vous êtes gentil.* (S3, NF). Les trois groupes de participants emploient, à quelques exceptions près, les mêmes types de réponses et dans le même ordre de fréquence. Il n'est pas surprenant que le remerciement apparaisse dans les cinq types de réponse de chaque groupe et que cet acte occupe la première position dans les réponses complexes.

5.4. L'ACCEPTATION DU COMPLIMENT.

5.4.1. FORMES DE REALISATION ET TAUX D'EMPLOI. Étant donné que l'acceptation du compliment est très fréquente dans notre corpus, nous consacrons une section à cette stratégie dont l'emploi s'effectue de trois manières : (1) à travers l'expression de la gratitude, de la joie ou de l'accord (en tant que réponses simples) ; (2) en combinant l'une des formes d'acceptation à un ou deux autres types d'actes positifs ; (3) en répétant une ou deux formes d'acceptation du compliment dans une seule réponse. Le cumul des formes d'acceptation du compliment, qui sert généralement à souligner la sincérité du locuteur, se réalise de deux façons. La première consiste à juxtaposer deux ou trois formules de gratitude (ex. *Merci, c'est gentil. J'apprécie vraiment*. (S2, NF) ; *Oh merci, j'apprécie le compliment. Je suis certaines que la tien serait bien aussi*. (S2, AP)), ou à employer une marque de joie ou d'accord immédiatement après une formule de gratitude (ex. *Merci pour le compliment ! je suis contente que vous aimé ma présentation. J'étais nerveux de parler devant la classe*. (S2, AP) ; *C`est gentil. Ça me fait plaisir que t`ai apprécié ma performance*. (S5, NF)). Le deuxième type de répétition consiste à employer une formule de remerciement, de joie ou d'accord vers la fin d'une réponse complexe, et ce après au moins un autre type d'acte de langage (ex. *Merci monsieur ! Le téléphone est nouveau. Je l'aime aussi.* (S6, AP) ; *Thanks! I absolutely love them and I am glad you do too!* (S7, NA) ; *Thank you, it's brand new, I like it too.* (S6, NA)).

En ce qui concerne le taux d'emploi des formes d'acceptation du compliment, le Tableau 5

[10] La fréquence des types de réponses les plus employés par les trois groupes s'explique par le fait qu'il y a beaucoup de variété des types non fréquents.

montre que le remerciement apparait 169 fois (18 simples et 151 complexes) dans les 152 réponses des AP. L'expression de la joie est réalisée dans 18 occurrences où elle est généralement placée en deuxième ou en troisième position. L'expression de l'accord est attestée 13 fois et se combine avec d'autres actes positifs. Dans les 200 réponses des NA, le remerciement apparait 202 fois (27 réponses simples et 175 réponses complexes). L'expression de la joie est attestée 27 fois et l'accord est exprimé dans 17 exemples. Enfin, les NF ont produit 78 réponses dans lesquelles le remerciement est attesté 79 fois. L'expression de la joie a été employée cinq fois et l'accord est exprimé dans quatre occurrences.

Tableau 5: Distribution des stratégies d'acceptation du compliment en nombres absolus et en pourcentages

	AP	NA	NF
Remerciement	169 (84.5%)	202 (82.11%)	79 (89.77%)
Joie	18 (9%)	27 (10.98%)	5 (5.68%)
Accord	13 (6.5%)	17 (6.91%)	4 (4.55%)
Total	200 (100%)	246 (100%)	88 (100%)

Il y a en moyenne 1.31 forme d'acceptation du compliment dans les réponses des AP, 1.23 chez les NA et 1.12 chez les NF. Ce résultat indique que l'on a moins recours au cumul des formes d'acceptation du compliment en français L1 qu'en français L2 et anglais L1. Parmi les trois groupes, les AP utilisent le plus grand nombre d'occurrences et semblent plus se rapprocher des NA. Ce choix peut s'expliquer par le fait que les AP pensent que le cumul / la répétition des formes d'acceptation souligne leur sincérité mieux qu'une formule « simple ».

5.4.2. FORMULATIONS DU REMERCIEMENT. Les trois groupes de participants ont employé des formulations directes et/ou indirectes (expressions de la joie, entre autres) pour exprimer la gratitude, comme le montrent les Tableaux 6 et 7.

Tableau 6: Formulations de remerciement en français L1 et L2

Types de formulations	**AP**	**NF**	
Formulations directes			
a) *Merci*.	60 (32.08%)	48 (57.14%)	
b) (Interjection) + merci + (adverbe/forme d'adresse)	78 (41.71%)	15 (17.86%)	
c) Merci + objet du remerciement (merci pour X/d'avoir V)	11 (5.88%)	2 (2.38%)	
d) (Interjection) + merci + (adverbe) + objet du remerciement (merci de/pour X)	6 (3.21%)	0	
e) Je vous remercie	0	1 (1.19%)	
Formulations indirectes			
f) C'est gentil	10 (5.35%)	10 (11.90%)	
g) J'apprécie le compliment	4 (2.14%)	2 (2.38%)	
h) Ça me fait plaisir (que …) / il est mon plaisir	3 (1.60%)	4 (4.76%)	
i) Ça me va droit au cœur	0	1 (1.19%)	
j) Je suis content(e) (que …)	5 (2.67%)	1 (1.19%)	
k) Je suis (très/tellement) heureux/fier/excité (que…)	7 (3.74%)	0	
l) Ça signifie beaucoup à moi d'entendre ça	1 (0.53%)	0	
m) C'est des bonnes nouvelles	1 (0.53%)	0	
n) Je suis au comble de la joie	1 (0.53%)	0	
Total	**187 (100%)**	**84 (100%)**	

Tableau 7: Formulations du remerciement en anglais L1

Types de formulations	**NA**
Formulations directes	
a) *Thanks / thank you*	112 (48.91%)
b) *(Interjection) + thanks / thank you + (adverbe/forme d'adresse)*	68 (29.69%)
c) *Thanks / thank you + objet du remerciement (thanks/thank you for the X*	4 (1.75%)
d) *I am (very) grateful*	4 (1.75%)
e) *I have t thank you*	1 (0.50%)
Formulations indirectes	
f) *I am (really) glad you …*	20 (8.73%)
g) *I (really) appreciate that/it*	6 (2.62%)
h) *It means a lot (to me)*	6 (2.62%)
i) *I'm so excited*	4 (1.75%)
j) *I am (really) happy*	2 (0.87%)
k) *That's so nice of you*	1 (0.43%)
l) *It's good to know people think it's delicious*	1 (0.43%)
Total	**229 (100%)**

On constate que les réalisations directes sont les plus nombreuses dans tous les trois groupes. En comparant les données en français L1 et L2, il apparait cependant que les AP sont plus directs que les NF. Nous avons relevé une formule explicite performative en français L1 (*Je vous remercie monsieur*), alors que cette forme n'apparait pas chez les AP. L'emploi fréquent des formulations directes par les AP peut s'expliquer par la simplicité desdites formes et leur caractère « passe-partout » dans les situations d'offre de « cadeaux ». Une autre raison de cet emploi serait le fait que les AP ont assimilé les formules directes en français très tôt, comme cela est le cas dans leur langue maternelle. Nous pouvons aussi noter que le taux d'emploi des formulations directes intensifiées (à l'aide des interjections (*oh, wow, ha*), formes d'adresse (*monsieur, madame, les amis, sir, guys*), et/ou adverbes (*beaucoup, a lot, very/so much*) est de loin plus élevé chez les AP (44.92%) que chez les NF (17.86%). Le taux des formulations directes intensifiées chez les NA (31.44%) est aussi plus élevé que celui des NF. On doit en déduire que le comportement des AP se démarque de celui des NF et va au-delà d'un simple cas de transfert pragmatique. En d'autres termes, les AP développent un comportement qui leur est propre: celui de l'hyper-sincérité dans l'expression de la gratitude. Il semble que les AP considèrent les formulations directes simples comme moins sincères / polies que celles contenant des marqueurs d'intensité et d'émotion comme les adverbes, interjections et formes nominales d'adresse. Le recours aux adverbes intensifs par les AP est limité à *beaucoup* et cela est aussi le cas chez les NF. Ces derniers emploient toutefois *vraiment* dans les formules indirectes (*c'est vraiment gentil ; J'apprécie vraiment*).

En ce qui concerne les formulations indirectes, nous avons remarqué que les AP disposent d'un répertoire plus varié que celui des NF. Au niveau des formulations du type *c'est gentil*, les analyses révèlent que pendant que les NF se limitent à la forme elliptique *c'est gentil*, certains AP tendent à étendre cette structure, comme dans les exemples suivants : *c'est gentil de votre dit* ; *c'est gentil de vous de dire ça* ; *c'est gentil de toi à dire cela*.). En regardant les formulations en anglais (ex. *That's so nice of you to say*), on peut déduire que certaines formules employées en français L2 sont des calques de l'anglais (ex. *Ça signifie beaucoup à moi d'entendre ça*. (S3, AP).

Il faut aussi noter que les AP éprouvent de la peine à réaliser les formulations du type *ça me*

fait plaisir (ex. *Cela me fait plaisir que vous l'appréciez!* (S4, NF). Les AP préfèrent plutôt les expressions telles que *Il est ma plaisir*. (S6, AP) ; *C'est mon plaisir*. (S4, AP). À bien regarder, il s'agit ici des formules calquées de l'anglais (ex. *It's my pleasure*), et qui y sont employées pour répondre à l'expression de la gratitude. L'analyse des formulations du type *je suis contente (que…)* révèle une grande différence quantitative et surtout qualitative. En effet, alors que l'unique occurrence attestée chez les NF est *je suis contente,* les cinq exemples des AP montrent que ces derniers emploient généralement une subordonnée (avec *de/que*), comme dans les exemples suivants : *Je suis très content d'entendre ces bonnes nouvelles*. (S3, AP) ; *Je suis contente que vous avez aime le match*. (S8, AP). Il en est de même des formulations du type *je suis heureux* (ex. *Je suis heureux que vous avez apprécié*. (S4, AP), que l'on ne retrouve pas chez les NF. Ces formes semblent représenter des cas de transfert de l'anglais dans la mesure où cette forme apparait avec une grande fréquence (8.73%) chez les NA (ex. *I'm glad you enjoyed my presentation*. (S2, NA)). Par ailleurs, la formule *Ça me va droit au cœur* (attestée en français L1) n'est pas employée dans les réponses des AP. Si les AP disposent d'un répertoire de formules plus varié que celui des NF, les formulations préfabriquées telles que *je suis vraiment ravi/touché(e) ; c'est gentil à vous/toi ; vous êtes/tu es bien aimable*, etc. n'apparaissent pas dans les réponses des AP et NF.

6. CONCLUSION. Notre étude avait pour but d'examiner la compétence pragmatique en français langue seconde, particulièrement dans le domaine des réponses au compliment, d'un groupe d'apprenants anglophones canadiens, et de comparer leurs stratégies avec celles de locuteurs natifs francophones et anglophones. Sur le plan de la complexité des réponses, il est apparu que, si la tendance chez les AP et les NF est de recourir beaucoup plus aux réponses complexes que les NA, la différence du taux d'emploi des réponses simples et des réponses complexes est plus marquée dans les réponses des AP. La verbosité de ces derniers semble mue par l'idée que les réponses complexes ont une valeur relationnelle positive plus accrue que celle des réponses simples. L'analyse des réponses simples a révélé que les AP emploient exclusivement l'expression de la gratitude, pendant que les NF recourent à plusieurs types d'actes de langage, même si ces derniers préfèrent de loin les remerciements. En examinant les réponses complexes, nous avons pu remarquer qu'à la différence des NF qui combinent deux ou trois actes de langage dans une seule réponse, les AP combinent jusqu'à cinq actes de langage dans leurs réponses. Autrement dit, les AP semblent manifester plus de créativité et de variété que les NF en termes de réponses complexes. Il y aurait ainsi la tendance chez les AP à livrer plus d'information dans leurs réponses. Ce résultat corrobore plusieurs recherches antérieures (voir Warga 2004; Thaler 2008 ; Economidou-Kogetsidis 2009), selon lesquelles les apprenants d'une langue seconde recourent généralement aux structures plus longues et complexes dans le but d'exprimer leurs intentions communicatives sans équivoque. Ce résultat indique que le traitement didactique des réponses au compliment en français langue seconde devrait sensibiliser les AP sur l'emploi des actes de langage tels que la minimisation, le déplacement, le renvoi du compliment, etc. comme réponses simples.

Du point de vue de la politesse, les résultats montrent que les NF et les AP mobilisent exclusivement des actes de langage à valeur relationnelle positive dans la réalisation des réponses simples et des réponses complexes. Dans ces deux groupes, on note la forte tendance à combiner l'expression de la gratitude aux actes tels que le déplacement, la minimisation, l'encouragement, le commentaire, le renvoi du compliment, etc. L'analyse a aussi révélé la prédilection du remerciement et d'autres formes d'acceptation du compliment en français L1 et L2, le cumul des formes d'acceptation du compliment et la combinaison abondante de ces actes à d'autres actes

positifs. Ces phénomènes montrent que les AP, les NA et les NF perçoivent l'échange de compliments de la même manière. Ils considèrent l'échange de compliments comme un événement social auquel ils participent à cœur-joie, un échange harmonieux au cours duquel la gaité, le partage, la valorisation mutuelle et le « contentement mutuel » sont les buts recherchés. Toutefois, l'enseignement de la compétence pragmatique dans le domaine des réponses au compliment devrait attirer l'attention des apprenants sur le fait que le compliment peut aussi provoquer un enchainement négatif. Et l'on devrait alors leur offrir la possibilité d'apprendre les différents types de réponses négatives attestés (désaccord, rejet, contestation de la sincérité, etc.) et leurs formes de réalisation.

L'analyse des formulations du remerciement montre que les AP sont plus directs et ceux-ci emploient plus de formes extensives et intensives que les NF. Cela s'explique par le souci d'exprimer un degré élevé de sincérité. Les AP pensent que les formules non intensifiées ou laconiques sont moins sincères et, par conséquent, moins polies, que celles avec d'autres éléments (objet du remerciement, forme d'adresse, adverbe, interjection). Il s'agit ici d'une différence interculturelle entre les cultures francophones et les cultures anglophones. En effet, le compliment est considéré en contexte anglophone (nord-américain) comme un acte valorisant pour la face du récepteur (Wieland, 1995). Il est tout à fait normal que le cadeau verbal soit accepté et que le récepteur se montre très expressif dans sa réponse afin d'indiquer au complimenteur à quel point le compliment fait du bien. Ainsi, le recours aux formes directes et intensives est guidé par le souci pour la clarté et la sincérité. Cet aspect semble être l'élément déterminant dans le choix des formes expressives chez les AP. Chez les francophones, par contre, le compliment peut provoquer un malaise ou de la méfiance. Cela pourrait expliquer leur laconisme dans le choix de leurs réponses (cf. Wieland, 1995). On observe un décalage entre les AP et les NF au niveau des formulations indirectes. Cela voudrait dire qu'il serait important de se pencher particulièrement sur l'emploi des formes indirectes, que les AP semblent n'avoir pas assimilées à ce stade du processus d'apprentissage.

L'objectif pédagogique de premier plan est sans aucun doute le développement de la compétence pragmatique des apprenants du français L2. Cet exercice appelle, entre autres, à la maitrise des variations interlinguales / interculturelles (français-anglais). Il ne faudrait cependant pas perdre de vue que le français est une langue pluricentrique (Pöll, 2005), qui présente (aussi) des variations régionales dans l'emploi des actes de langage. La prise en compte de la variation régionale dans la réalisation des réponses au compliment dans quelques espaces francophones (Canada, France, Cameroun, Belgique, Suisse) ne pourrait que renforcer la compétence pragmatique et interculturelle des apprenants du français.

RÉFÉRENCES

BARRON, ANNE. 2003. *Acquisition in Interlanguage Pragmatics. Learning how to do things with words in a study abroad context*. Amsterdam: John Benjamins.

BELLACHHAB, ABDELHADI, & NAZIH RAWASHDEH. 2009. L'acquisition de la compétence sémantique et pragmatique à partir des stratégies de communication: le cas de l'excuse en tant qu'acte menaçant. In *Construction du sens et acquisition de la signification linguistique dans l'interaction*, éd. par Olga Galatanu, Michel Pierrard & Dan Van Raemdonck, 165 – 183. Peter Lang: Bruxelles

BLUM-KULKA, SHOSHANA, JULIANE HOUSE, & GABRIELE KASPER, eds. 1989. *Cross-cultural*

pragmatics: Request and apologies. Norwood, NJ: Ablex.
BROWN, PENELOPE, & LEVINSON, STEPHYEN C. 1987. *Politeness: Some universals in language usage.* Cambridge: Cambridge University Press.
BU, JIEMIN. 2010. A study of pragmatic transfer in compliment response strategies by Chinese learners of English. *Journal of language teaching and research* 1(2): 121-29.
ECONOMIDOU-KOGETSIDIS, MARIA. 2009. Interlanguage request modification: The use of lexical/phrasal downgraders and mitigating supportive moves. *Multilingua,* 28(1): 79-111.
EDMONDS, AMANDA. 2010. Je suis vraiment désolé" ou comment s'excuser en interlangue. In *Identité, alterité et interculturalité*, éd. par Bénédicte de Buron-Brun, 69-82. Paris: L'Harmattan.
HANCOCK, VICTORINE. 2000. *Quelques connecteurs et modalisateurs dans le français parlé des apprenants avancés. Étude comparative entre suédophones et locuteurs natifs.* Thèse de doctorat, Université de Stockholm.
HERBERT, K. ROBERT. 1989. The ethnography of English compliments and compliment responses: A contrastive sketch. In *Contrastive pragmatics*, ed. by Wieslaw Oleksy, 3-35. Amsterdam: John Benjamins.
KASPER, GABRIELE. 1998. Interlanguage pragmatics. In *Learning foreign and second languages*, ed. by Heidi Byrnes, 183-208. New York: The Modern Language Association of America.
KERBRAT-ORECCHIONI, CATHERINE. 1998. *Les interactions verbales, t.3*. Paris: Armand Colin.
---. 2005. *Les actes de langage dans le discours. Théorie et fonctionnement*. Paris: Armand Collin.
LEECH, N. G. 1983. *Principles of pragmatics*. London: Longman.
NELSON, L. GAYLE, WAGUIDA EL BAKARY, & AL BATAL, MAHMOUD. 1995. Egyptian and American compliments: Focus on second language learners. In *Speech acts across cultures: Challenges to communication in a second language*, ed. by Susan M. Gass & Joyce Neu, 109-28. Berlin: Mouton de Gruyter.
PELLET, STEPHANIE HELENE. 2005. The development of competence in French interlanguage pragmatics: The case of the discourse marker 'donc'. Ph.D. dissertation, University of Texas at Austin.
PÖLL, BERNHARD. 2005. *Le français langue pluricentrique? Étude sur la variation diatopique d'une langue standard.* Frankfurt am Main: Peter Lang.
SHARIFIAN, FARZAD. 2008. Cultural schemas in L1 and L2 compliment responses: A study of Persian-speaking learners of English. *Journal of Politeness Research* 4: 55-80.
SMITH, JAMES BRYANT. 2003. *The acquisition of pragmatic competence: Compliment response strategies in learners of Spanish*. Ph.D. Dissertation, Louisiana State University.
THALER, VERENA. 2008. L'enjeu de la compétence pragmatique en langue étrangère : une étude sur les procédés de mitigation en allemand L1 et L2. *Canadian journal of applied linguistics* 11(3): 193-214.
VILJAMAA, HEIDI. 2012. *La compétence pragmatique en FLE. Emploi des requêtes et des remerciements chez des étudiants finlandais*. Mémoire de Maitrise. Université de Turku.
WARGA, MURIEL. 2004. *Pragmatische Entwicklung in der Fremdsprache. Der »Sprechakt« Aufforderung im Französischen*. Gunter Narr Verlag. Tübingen.
---. 2005. 'Je serais très merciable': Formulaic vs. creatively produced speech in learners' request-closings. *Canadian journal of applied linguistics* 8(1): 67-93.
WARGA, MURIEL, & SCHÖLMBERGER, URSULA. 2007. The acquisition of French apologetic behavior in a study abroad context. *Intercultural Pragmatics* 4(2): 221–251.

WIELAND, MOLLY. 1995. Complimenting behavior in French/American cross-cultural dinner conversations. *The French Review* 68(5): 796-812.
ZHIHONG, PU. 2009. Plurilinguisme dans l'interlangue. *Synergies Chine* 4 : 109-118.

This article was first published at www.lacussquare.org.

LACUS Forum **39:2.48-56(2025)**

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WORDS AND THINGS: COFFEE EX MACHINA

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Abstract. How words relate to things in our cognition is a problem long discussed. A lifetime ago Emile Benveniste dealt with cognitive problems that present simultaneously a synchronic and a diachronic face. One case was the relation of Indo-European words for doubt or indecision with the numeral 'two'. He included Armenian, Greek, Latin and other cognates, but here I mention only Germanic and Latin data:

German *zweifeln* 'doubt', *verzweifeln* 'despair', and *zwei '2'*.
Latin *dubium* 'doubt', *dubito* 'I doubt', and *duo* '2'.

IN THE PRESENT PAPER I APPLY THIS APPROACH to a nearly contemporary set: *espresso, éclair, macchiato,* and *cappuccino.* They are variants on *caffè ex machina* and the words date only from 1901 in Italy and the years right after World War II in San Francisco and New York's Greenwich Village.

Figure 1. *Art Nouveau poster by V. Ceccanti features gorgeous ladies in the skirts fashionable before the First World War, sipping CAFFÈ ESPRESSO — SERVIZIO ISTANTANEO.*

THINGS. Ancient Egypt's scribes, when they spoke of 'words', never referred to their 'meanings'; their preference was to concentrate on 'things' and their 'names'. Among the Greeks the earliest word-lists were not Lexica but Onomastica: catalogues of things arranged under their kinds, not alphabetically classified series of words (Gardiner 1947).

Caffè Espresso. The words and their etymology. Ancient Rome knew no drinks made by infusion. In Asia, flower petals and leaves were infused in hot water to create teas and herbal "teas". As were roots, herbs, seeds, and barks. Romans never sipped the tea of far-off India and China.

Figure 2. *Bezzera stand.*

1. ESPRESSO. A.D. 1906, At the Milan World Exposition Bezzera unveiled a machine that made an infusion drink out of coffee. Before Bezzera the only way to drink a solid was decoction, Turkish coffee, for example.[1] You had to first grind the roasted beans to powder, then cook solid, dry coffee beans.

His invention was hailed by Alfredo Panzini in his dictionary of new words in Italian (1918). The chronology was noted in modern lexica, but their editors overlooked the essential fact that the new machine did an infusion. Almost a century after Panzini Treccani publishing house has trumped the OED, Merriam-Webster, etc. The simple truth is now on the internet. http://www.treccani.it/vocabolario/espresso.

[1] "Tea or Infusion: (made of the leaves & blossoms) An infusion extracts the active principles of herbs in water, or other fluid, without simmering or boiling; and it also refers to the liquid product of such a process." www.lifebalm.com/page.cgi?definitions

> ***Caffè espresso* is *caffè ristretto*, prepared expressly for the customer who has ordered it, with special machines of various kinds.[2] The masculine noun *espresso* is used in the trattoria for dishes prepared at a moment's notice.[3]**
>
> The key word for the etymology of caffè espresso is a*pposta* **'**on short order**'**. Espresso, a cup at a time, for one customer at a time, is so prepared as to control the rapid changes in the organoleptic characteristics of coffee not immediately consumed. In plain English, coffee gets bitter and flat standing in a pot or urn in the American cafeteria or diner. Espresso coffee does not. It is always brewed to order and consumed directly and fresh, in a word, espresso.[4]

Though Bezzera exhibited at the 1904 St Louis World's Fair, and Pavoni, having acquired the patent, exported the Bezzera machine to the United States in 1927, the espresso revolution reached New York and San Francisco only after two world wars. Italo-Americans in my upstate New York hometown in the 1940s and 1950s knew not "espresso". Nor did Brooklyn's Italians, either. My army buddy in 1959-60, Toni Sara, reported the same. He had native English, Italian and Sicilian. American Italians didn't say *ciao* then, either.

2. ITALIAN LEXIS AND GRAMMAR 1. *Caffè espresso*. The foreigner in Italy learns soon to order *un caffè,* not *un espresso*. This is not "coffee pressed out". Genuine Italian from Vulgar Latin is *spremuto* 'pressed out, squeezed', not *espresso*: una spremuto di limone 'a squeeze of lemon'. The OED, Merriam-Webster editors, et al. practice what Bengali teachers call *guru-chandali,* "pandit's rebuke for mixing tatsama (Sanskrit words) with dishi (native Bengali)" www.isical.ac.in/~rc_bangla/bangla.html.

Grammatically, *caffè espresso* is made up of noun + adjective, but is a compound noun, or N + N. *Espresso* began as a participle (verbal adjective) of Latin *exprimo* 'press out', but though adjectival, it is adjective no more here. That is, it does not appear in both masculine and feminine genders and take the plural. Cf. *consegna espresso* 'express delivery'.

In Italian military history, the phrase *un huomo espresso,* or *un uomo posto*, and modern Latin *homo expressus*, refers to a man pulled out of the ranks to carry, preferably on horseback, an urgent message to an important personage. The exhausted runner from Marathon to Athens had to do it on foot. In England a couple generations ago a gentleman would write a note to the messenger on the envelope: *Haste, post, haste!*. In Italy such a communication was "a letter by express courier" – *una lettera per corriere espresso*, in short, *una lettera espresso*, then simply *un espresso*. Transferred epithet. Shifted from its place in the phrase *per corriere espresso* 'by express courier', the fragment *espresso* becomes adverbial with the omission of the preposition.

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[2] *Ristretto*, that is, easy on the water.

[3] **"Caffè e[spresso], caffè ristretto preparato apposta per il cliente che l'ha ordinato, con speciali macchine di vario genere; come s[ostantivo] m[aschio]: in trattoria, piatti e[spresso], le vivande che vengono preparate sul momento."**

[4] La necessità di eseguire e servire di volta in volta la quantità necessaria ad accontentare il palato del cliente, insieme al repentino modificarsi delle caratteristiche organolettiche del caffè non immediatamente consumato, diede origine a questo nuovo modo di preparazione che permette di ottenere velocemente tutte le tazzine necessarie. http://www.jollycaffe.it

Figure 3. *Cappiello train.*

PONY EXPRESS
St. JOSEPH, MISSOURI to CALIFORNIA
in 10 days or less.
WANTED
YOUNG, SKINNY, WIRY FELLOWS
not over eighteen. Must be expert riders, willing to risk death daily.
Orphans preferred.
Wages $25 per week.
APPLY, PONY EXPRESS STABLES
St. JOSEPH, MISSOURI

Figure 4. *Pony Express*

After the Great War Leonetto Cappiello's 1922 poster parodies the movie cliché of the speeding train catching a mail bag off the hook.[5] A dapper Londoner in trench coat and fedora hangs perilously out the carriage door of an express train to grab a cup of express coffee on the fly.[6] Cappiello's picture is a sight gag, a rebus pun. The Italian for *an express train* is *un* [sc. *treno*] *espresso*.

Figure 5. *Espresso stamp.*

Spaghetti espresso is slow food. While in English the term *espresso*, but not *express*, refers only to coffee, in Italian the term is used with wider scope, for foods and drinks or any service delivered on short order. Pasta, for example, is commonly cooked before the rush hour. The chef has boiled and drained a potful. It stands on the stove ready for the waiter's order, whereupon the cook plunges a portion in boiling water. The discerning diner wants the cook to take dry pasta for

[5] Webster 1913: "[A]n iron rod, or other contrivance, attached to a railroad car for catching a mail bag while the train is in motion. ... without stopping" www.railroadextra.com/Page0004.html

[6] Paul Cormac Maher tracked down the posters. For "La Victoria Arduino" by Leonetto Cappiello (1922) see www.homedecorators2.artselect.com. The glistening machine, treated as a winged Nike, and the firm producing it (1905) were named by the Torinese engineer Pier Teresio Arduino for his wife, Victoria.

him and cook *spaghetti espresso*, i.e. expressly for him. This is served on the spot, not prepared in advance, only to get soggy. Though this was general practice fifty years ago, younger Italians may not be aware of the practice today and might confuse it with fast food service.
Beware adventitious association: The word *espresso* does not directly mean 'quick'. It takes fifty seconds only on Bezzera's machine to infuse powdered coffee with water at Celsius 90° to drip through a double spout into a little cup, but *spaghetti espresso* takes up to ten minutes. Industry dictionaries stumble when treating the Italian construction Noun + Adjective.

3. ITALIAN LEXIS AND GRAMMAR 2. *Cappuccino*. Old Vienna once named coffees after the color of monastic habits: brown, black, beige. Such is not the case with Italy's cappuccino. The Franciscan habit has been brown only since the 1920s. Earlier Franciscans were the Grey Friars. *Cappuccio* is a word for the monk's cowl or for a fancy Renaissance hat. The term in coffee service is parallel to the English concept of a head on your beer. *Un caffè cappuccio* is *caffè* espresso with a hood of white. When the celebrant is vested for Mass, the cowl is tucked under the alb and is seen as white.

Macchiato. In the Wi-Fi café it is widely believed that a *macchiato* (pronounced *Mocky Otto*) is "stained" espresso. No. You have stained or spotted someone's necktie, if you spill wine on it. But a spot is not always a stain and a stain is not always a spot. Leopards, Dalmatian hounds and planet Jupiter have spots, not stains. If you chew betel nut, your teeth are stained, but not spotted. Today's lexicon is yesterday's syntax. Italians may re-phrase their order at the coffee bar to forms that reveal the true origin: "*Dammi una macchia*" – No need to specify "di latte – of milk".[7] It's simply "give me a spot'.

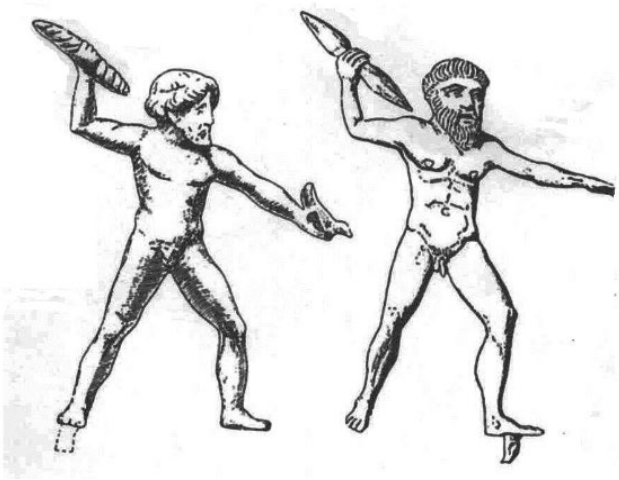

Figure 6. *Taranis.*

[7] Latin *macula* 'spot' and 'stain'.

***Figure 7**. Eclairs.* ***L' éclair au chocolat*. In the afternoon we might go to a café for *un éclair au chocolat* – a chocolate éclair. At a Spanish table this may be called *bomba de chocolate* — chocolate bomb.**

The first attestation of *eclair* in English so far is from 1850. The lexica wonder if the treat was dubbed "lightning" because of the splash of whipped cream of the topping or that the treat is consumed quickly, in a flash. Some years ago, Raimo Anttila was asked by a student why the French called a pastry a "lightning" – *éclair au chocolat* – chocolate eclair. He referred her to my LACUS paper on the Indo-European cult of weapons. The thunder-ax was a sacred object for thousands of years (Maher 1986).

Images are not only pictures of things, but also prompt recall words, their homonyms as well, and words figuratively or literally used. As long as scholars believed that the picture writing of ancient Egypt was merely a matter of pictures, nobody could read the ancient Egyptian language. Champollion's success in deciphering Egyptian hieroglyphics came when it dawned on him that a picture not only stands for a thing, but also the name of the thing. An illiterate can draw a picture of a yew tree and let it stand also for any homophone of the name of the *yew*. English words homophonous with *yew* are the name of the letter *U*, *you*, and *ewe*.

The invention of the éclair pastry is attributed to Marie Antonin Carême, baker successively to Louis XVI, Napoleon, Talleyrand and George IV. Carême modeled his concoctions on temples, pyramids and ruins that he read up on at the Bibliothèque Nationale. His monumental pieces could stand over a yard high. In 1816 England's Prince Regent, the future George IV, appointed him chef. Carême didn't like England and returned home in 1817.

> *Meanwhile, in 1774 Pierre Clement Grignon [1723-1784], master iron founder, had excavated on royal orders a Gallo-Roman site at Châtelet in Champagne. The results were published in 1819 by Claude Madeleine Grivaud de la Vincelle [1762-1819]. One of the most sensational finds was an image of the Gallo-Roman Taranis, equivalent of Rome's* Iuppiter tonans *'Jupiter Thunderer' and the Greeks' Zeus.*[8] *I'll wager that the thunderbolt brandished by Taranis inspired Carême's puff pastry. They are as close as you can get in shape and size. This, not the weather man's thundering sky, was Carême's éclair. Now comes a new role for Taranis, a French air force drone, unmanned attack airplane – death from the sky.*

[8] By metathesis from Proto-Celtic **Toranos* "thunder": Welsh *taranu* 'to thunder' and *taran* and 'thunder' (nun), Old Norse *Þórr*, Anglo-Saxon *Þunor*, Old High German *Donar*, Proto-Germanic **þunraz* ~ **þonar-oz*, Hittite theonym *Tarhun.*

Figure 8. *Taranis again. French drone weapon.*

Resemblance to famous or common objects often inspires the shape and name of confections. The croissant is the Turkish crescent moon. The noble baguette mimics the humble stick. The submarine sandwich *is not a snorkeler's snack, but a long tubular bread that looks like a U-Boat hull.*

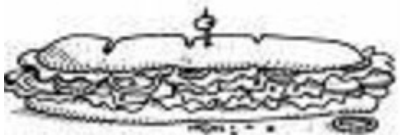

Figure 9. *U-Boat sandwich.*

In his contribution to the 39th LACUS forum, Ted Supalla stressed again and again that today's morphology is yesterday's syntax. My own work has long had the same emphasis (Maher 1977). Today's lexicon is that, too, and not just a bunch of primordial sticks that we use to construct a big tinker-toy. We get our sticks from the tinker toys we break up as babies. We break them into pieces and go on to build new toys.[9]

4. AFTERWORD, RUDOLF MERINGER'S MAXIM. Keine Wortforschung ohne Sachforschung – No word study without thing study. Meringer, an Austrian, was perplexed by the unmistakable phonetic relation between the German noun *Wand* '(house) wall' and the verb *winden* 'to wind', same as in *singen sang gesungen Sang* ~ English *sing sang sung song* (Meringer 1898, 1904 / 1905).

The Eureka moment came for Meringer in regard to the riddle posed by the ill fit of the German noun *Wand* 'wall' in the network of the verb *winden* 'to wind, to plait'. Compare the English set *song sing sang sung.* But just how to fit the words with the things Meringer could not see, since his urban house walls didn't fit the verbal data. It was on travels in Austria-Hungary's portentously occupied Serbian land of Bosnia-Herzegovina that his eyes were opened. Meringer solved his riddle of the German lexicon when he saw a house in Bosnia being built in a manner suggested by Russian *plotnik*, which is translated 'carpenter', but is part of a formal network with the verb *plet'* 'to plait, to wind'. In Serbian Bosnia he watched men plaiting withies for plastering, as in **Figure 10**.

[9] Dwight Bolinger used this metaphor in a chapter of his book on the phrasal verb 1971. Harvard university refused to print this as the editors felt it was insulting to Chomsky et al. Bolinger gave me his imprimatur.

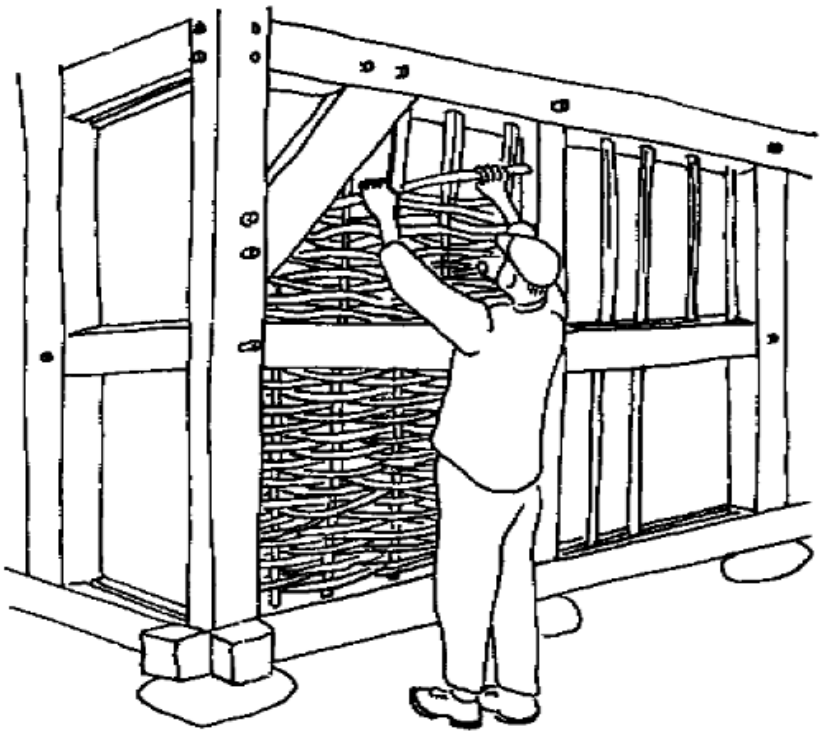

Figure 10. *Wattle & Daub house, Harburg Open Air Museum, Germany.*

REFERENCES

AHRENS, CLAUS, & HANS-JOSKA PINTSCHOVIUS. 1976. *Zweite, veränderte Auflage. Veröffentlichung des Hehns-Museums Nr. 24. Hamburg*. *Außenstelle des Helms-Museums in Hamburg-Harburg*. Balla Druck: Gebrüder Ravens, Winsen (Luhe).

BATTAGLIA, SALVATORE. 1961-2002. *Grande Dizionario della Lingua Italiana*. Torino: Unione tipografico-editrice torinese (UTET).

BOLINGER, DWIGHT. 1971. *The Phrasal Verb in English*. Cambridge MA: Harvard University.

CORTELAZZO, MANLIO & PAOLO ZOLLI. 1979, 2004. *Dizionario etimologico della lingua Italiana*. Bologna: Zanichelli.

GARDINER, ALAN H. 1947. *Ancient Egyptian Onomastica*. Oxford: Oxford University Press.

GRIVAUD DE LA VINCELLE, CLAUDE MADELEINE . 1819. *Arts et métiers des anciens: représentés par les monuments ou recherches archaeologiques: servant principalement à l'éxplication d'un grand nombre d'antiquités recueillies dans les ruines d'une ville gauloise et romaine, découvertes entre Saint-Dizier et Joinville (Haute-Marne).*

JĒGERS, BENJAMIŅŠ. 1966. Verkannte Bedeutungsverwandschaften baltischer Wörter. *Kuhns Zeitschrift* 80, 6–162, 291–307.

MAHER, JOHN PETER. 1977. *Papers on Language Theory and History*. Amsterdam: Benjamins.

---. 1986. The Cult of Weapons in Rock Art and Indo-European Languages. *LACUS 13: 53-90.*

MERINGER, RUDOLF. 1898. Etymologien zum geflochtenen Haus (Etymologies Regarding the Woven House). A*bhandlungen zur germanischen Philologie. Festgabe für Richard Henzel.* Halle a. S.

---. 1904/1905. Wörter und Sachen. *Indo-Germanische Forschungen 17.*
---. 1906. *Das deutsche Haus und sein Hausrat*. Leipzig: Teubner.
PANZINI, ALFREDO . 1918. 3rd ed. *Dizionario moderno. Supplemento ai dizionari tradizionali.* Milano: Hoepli.

This article was first published at www.lacussquare.org.

LACUS Forum **39:2.57-66 (2025)**

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RHYTHMICALITY: PRECONDITION TO THE EVOLUTION OF LANGUAGE

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Abstract. There seems considerable consensus that speech developed out of the rhythmicity of dancing, chanting…(Dunbar 2004:133ff, also Knight 1998:83, Donald 1998, Merker 2011:thesis 6, Stringer 2012:121). However, rhythm and rhythmicity tend to be simply taken for granted, while the latter evidently requires (human) rhythmic awareness/control or 'rhythmicality'. The reason for this neglect is not far to seek. Rhythm is an elusive and subtle phenomenon and since the Alexandrine concepts of trochees (- ˘), iambs (˘ -), dactyli (- ˘ ˘), anapaests (˘˘ -) and amphibrachs (˘ - ˘), nothing much has been added to our understanding of it. Indeed, one may say that this lack of theory leaves a vast hiatus in linguistics and other human behavioural sciences. Section 1 attempts to demonstrate that English has a 3-tier rhythmic hierarchy with 4 degrees of 'beat' and postulates that as a linguistic universal. Section 2 proposes a scenario for the evolution of human rhythmicality out of bipedalism some 100,000 generations ago (leaving the subsequent genesis and evolution of language for a future article). Section 3 presents a definition of rhythmicality and some additional notes on the underlying theory.

Keywords: rhythm, stress, speech, evolution, neurocognition

1. RHYTHMIC HIERARCHICAL COMPLEXITY IN ENGLISH. My first concern is to persuade the reader that English, and by implication any other language, exhibits a complex *three*-tier rhythmic hierarchy, with *four* degrees of 'beat' or rhythmic stress, no more and no less. There is a vast literature on linguistic stress (cf. Patel 2008:118-179) that treats stresses, generally without even mentioning the word rhythm, as 'things' one can move about between syllables. Rhythmic stress is then often confused or equated with melodic, temporal, vocalic or even syntactic 'prominence'. One approach, known as *metrical phonology,* indeed allows for numberless degrees of such 'stress-es'. See for instance Selkirk (1984:46), cited in Patel (2008:140). The authoritative English pronouncing dictionaries (Longman's, Cambridge, Oxford, Kenyon and 35 Knott), on the other hand, allow for only *three* degrees of stress. All these dictionaries completely ignore another (perfectly obvious) degree of stress we may call tertiary or w(eak), marked here by a dot in words like *educational* – Ædjuæke.ʃn `nll, *educationally* – Ædjuæke.ʃnnl`li, *Edinburgh* – ædın`br, or

æedɪnb,`r, etc. Within linguistics and phonetics, at least, the treatment of rhythm still seems at a rather unscientific stage.

For some discussion of timing and rhythm in British English and for some comparison with American English and French, I may refer to my earlier LACUS articles, (vBuuren, 2005, 2009), both available on-line. Here, to make my point, it suffices to demonstrate (on the accompanying audio-file) and discuss three renderings of Rudyard Kipling's lines (made famous by Frank Sinatra):

For the wind is in the palm trees, and the temple bells they say:
"Come you back you British soldier; come you back to Mandalay!"

English verse, as we know, is generally in lines of three, four or five metric 'feet': trochees (- ˘), iamBs (˘ -), dactyli (- ˘ ˘), anapaests (˘ ˘ -) or even amphibrachs (˘ - ˘). For instance, *Tyger! Tyger! burning bright* is in trochaic tetrameters, while *Shall I compare thee to a summer's day?* is in iambic pentameters. All five terms go back to the Alexandrian grammarians over two millennia ago. Each such foot has two degrees of stress: one strong syllable and one or two (no more!) weak syllables. Oddly enough, there is never any mention of feet consisting of one strong syllable only, such as *bright* above, or as in *baa baa black sheep, have you any wool, yes, sir, yes, sir, three bags full.* I shall call that a mone (-), thereby allowing for six metric feet in all. Instead of 'foot', by the way, a vastly misused term by now, I prefer to use the term 'byte'. We speak, I shall suggest, in bytes and pieces.

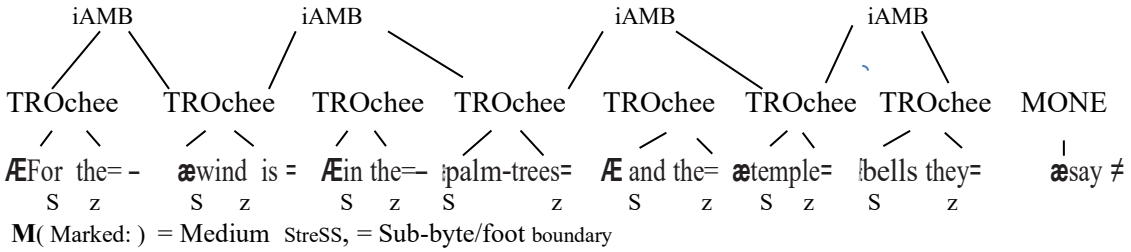
Kipling's *Mandalay,* however, is most unusual, in being 'dipodic' (cf. At- tridge 1982:114ff). Only a very young child just learning to read might perhaps want to pronounce it isochronously (i.e. with equal durations between the Strong stresses), as a trochaic octameter, paying no attention whatever to the meaning, thus:

	TROchee	TROchee	TROchee	TROchee	TROchee	TROchee	TROchee	MONE
(1)	**æ**For the= –	**æ**wind is =	**æ**in the=–	ˈpalm-trees=	**æ**and the=	**æ**temple=	ˈbells they=	**æ**say ≠
	S z	S z	S z	S z	S z	S z	S z	

S (marked:) = **S**trong StreSS, z(unmarked) = zero StreSS, = = byte boundary, ≠ = line/piece boundary

æCome you= **æ**back you= **æ**British= **æ**soldier= **æ**come you=**æ**back to = **æ**Mand=**æ**lay#
(as firstline)

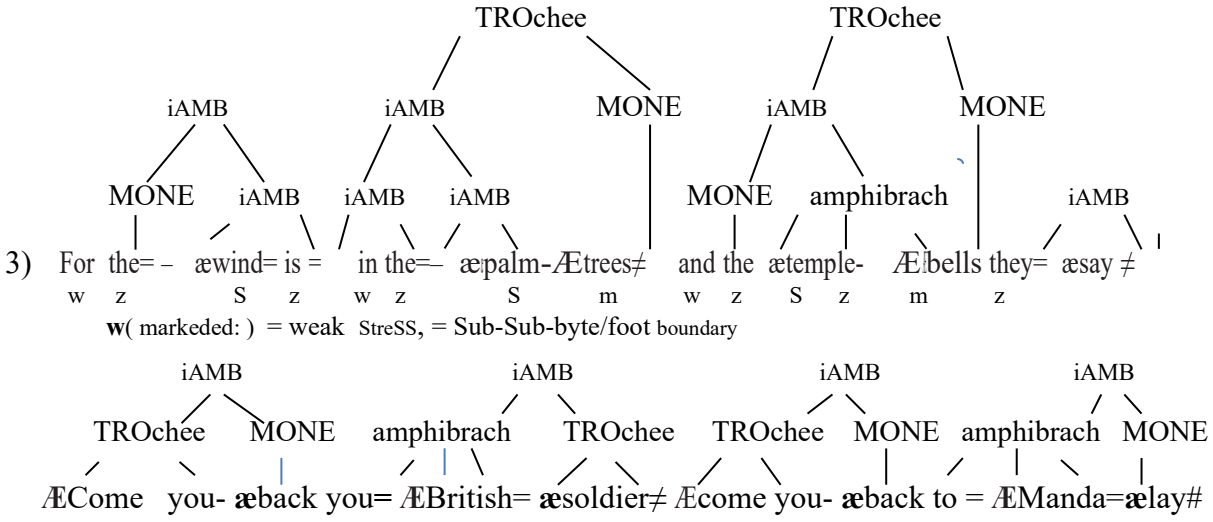
I demonstrate such a reading (of the first line only) in the audio-recording and in the intensity tracing of that shown in Figure 1. It took me almost four seconds to say. The reader is invited, however, before studying the recordings and intensity tracings provided to first 'impressionistically' compare his/her own renderings for (1), (2), and (3). One rather surprising (indeed problematic) feature in tracing (1) is that the *isochronicity* between the S-syllables (a 'hot' item in the literature) pertains, not to the initial consonant(s) of each S-syllable (where I have drawn the foot/byte boundaries), but to its release, i.e. to the following vowel. Note, by the way, that with (aspirated) p and t that is actually *before* the voicing sets in – all the foot/byte divisions and phonetic transcriptions in Fig. 1 have been drawn in as accurately as possible. Still reading mechanically and isochronously, i.e. without giving too much weight to the meaning, most of us would prefer to render these lines as iambic tetrameters, with each of the four iamBs consisting of two trochees, the final one of a trochee and a mone. Clapping one's hands on each S-syllable both in (1) and (2) will help to clearly bring out –and feel!– the difference between these two rhythms.


iAMB iAMB iAMB iAMB
TROchee TROchee TROchee TROchee TROchee TROchee TROchee MONE
(2) ÆFor the= – æwind is = Æin the=– palm-trees= Æ and the= ætemple= bells they= æsay ≠
S z S z S z S z S z S z S z
M(Marked:) = Medium StreSS, = Sub-byte/foot boundary
ÆCome you= æback you= ÆBritish= æsoldier= Æcome you=æback to = ÆMand=ælay#
(as firstline)

When comparing his/her own renderings, it will strike the reader immediately that it is said faster than (1), each line taking about half a second or 50 centi-seconds less. One must then conclude that such 4 x 12.5 centi-seconds time-saving in (2) is achieved mainly by speeding up the four sub-bytes and/or their final delays, and our intensity tracing indeed confirms these fairly obvious observations. It seems to indicate that the M syllables are marginally shorter than the corresponding S's in (1), as are the sub-byte endings concerned. The only slight problem is again that the rhythmic *(sub-)beats* start not where indicated, i.e. at the beginning of the syllable, but only *after* the release of its initial consonant, if any, coinciding indeed with our handclapping or tapping, if any.

We now take the third step. No self-respecting musician will play mechanically, isochronously, from written music, without any feeling or meaning. Only barrel-organs, pianolas, drum-computers (and very young learners!) do that. In musical notation all bars are exactly the same length, suggesting isochron(icit)y and fixed accents. Indeed, the slightly more abstract theory of verse prosody implies essentially the same thing: isochronous feet or bytes with fixed stresses – as we found by clapping our hands.

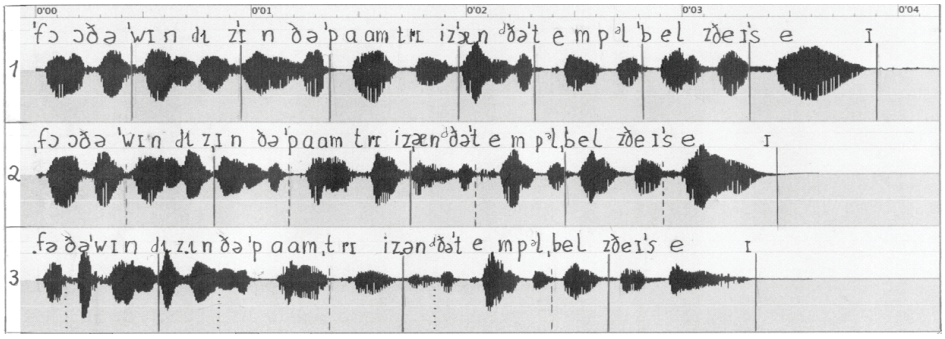
But of course, like musicians, any self-respecting reader of verse must escape from this purely notational straight jacket, to give *meaning* to the text. So, this is how we *must* arrive at a reading like:


TROchee TROchee
iAMB iAMB MONE iAMB MONE
MONE iAMB iAMB iAMB MONE amphibrach iAMB
3) For the= – æwind= is = in the=– æpalm-Ætrees≠ and the ætemple- Æbells they= æsay ≠
w z S z w z S m w z S z m z
w(markeded:) = weak StreSS, = Sub-Sub-byte/foot boundary
iAMB iAMB iAMB iAMB
TROchee MONE amphibrach TROchee TROchee MONE amphibrach MONE
ÆCome you- æback you= ÆBritish= æsoldier≠ Ækome you- æback to = ÆManda=ælay#

Note that all (sub)(sub)byte boundaries except that in the word *Mandalay,* and thereby the rhythmic slowdowns, are now at the highest grammatical-semantic boundaries rather than in the middle of such units as in (1) or (2). In other words, the rhythmic gestures coincide with

neurocognitive gestures or activations, rather than running counter to these, and as appears from the intensity tracing there is no longer any suggestion of isochrony. The reader may wish to gesticulate–as convincingly as possible–with both hands, body, eyes and facial gestures and compare this with the earlier isochronous handclapping.

In (2) we had to recognise a two-tier rhythmic hierarchy with three degrees of stress. In (3) we see (up to) three tiers, with therefore four degrees of stress. It appears that, at least timing wise, a syllable z:w = w:M = M:S, etcetera. This is the point I am trying to make: the rhythm of English and a dozen other languages observed exhibit a three-tier hierarchy with the four degrees of stress S, M, w and z, no more and no less. Indeed, I postulate this (until falsified) as a *linguistic universal*. Which is saying of course (to encourage falsification) that all rhythmic differences between languages, e.g. English and French, are due exclusively to different word structures, vowel and consonant durations, syllabifications, etc., never to deviations from the universal three tier four-degrees structure proposed.



There is actually an excellent independent argument called RAP for recognising a w-stress (and thereby a third tier in the hierarchy) besides the primary (S), secondary (M) and 'unstressed' (z) degrees of the dictionaries and the textbooks. This is that some so-called unstressed syllables are evidently less unstressed than others as indicated in my *educationally* example above. Amazingly, although noticed well over a century ago by the phoneticians Henry Sweet (1876, repr. 1913:11, 1877:¶267) and Paul Passy (1887, 5th ed. 1899: ¶81), it has been ignored ever since. Only Selkirk (1984:12, fn13) and other writers on metrical phonology now seem to acknowledge their observations.

Both Sweet and Passy pointed out a 'rhythmic principle of alternation' allowing one or two, but *no more* weaker beats between stronger ones (and, one might add, no more than one before or after a pause). If any more, one of these beats *had* to be less weak than the others. We may call this the Rhythmic Alternation Principle or RAP. It is illustrated nicely by (British) English *how uncomfortable that there was a commemoration* – `hay ;n æk;mf,t,`b,l \,t \, `w,z , k, Æmem, ære.]nn. It is simply impossible to have z-stresses on all the eight consecutive shwa-syllables. Depending on the *meaning* in mind a speaker may of course give a w-stress to \, (and therefore to the article, as well) rather than to w,z, but a native speaker could never give a w-stress to t, and \,t instead of b,l, unless of course, he *means* (!) to lay on, say, an Indian accent. Subtle, isn't it? I did warn the reader that we are dealing with an elusive and subtle phenomenon.

As already suggested, the other noticeable point in (3) as opposed to (1) and (2), besides (sub)(sub)bytes naturally coinciding with neurocognitive and other gestures, is that they are clearly *not* isochronous in any sense. One would hope–again in vain?– that this might put a stop to the often falsified but seemingly ineradicable theory started by Joshua Steele (1775) that English speech is 'somehow' isochronously stressed-timed and French syllable-timed and that all

languages fall within either category. Such mechanistic views completely ignore the role of word and phrase division, i.e. *meaning*, i.e. neurocognitive processing, on the timing of so-called 'feet'. It seems quite unrealistic, and another good reason, therefore, for discarding the term 'foot' and replacing it by 'byte = thought'.

In actual fact, the rhythm of speech is always allochronous, never isochronous, except in special cases like (communal) incantations, the 'calling' in square-dancing and of very young children reciting verses expressing *their* very specific meanings. If the meaning of a word is the activation of a neurocognitive network for a *concept*, that of a byte as in (3) is a neurocognitive concept-constellation or *thought*, and that of a piece a ditto thought-constellation or *idea*. These formulations, and much else in this article, were inspired by the work on information theory by my former colleague Nel Keijsper (1985), on neurocognitive linguistics by Sydney Lamb (1999) and on 'learning how to mean' and functional grammar by Michael Halliday (1975, 1985).

Pursuing this approach, a sub-byte/thought may be conceived of as a neural activation within an activation, and a sub-sub-byte/thought as one within a subactivation. Wheels within wheels, so to speak, meanings within meanings, neural networks within networks, rhythms within rhythms, both simultaneously and sequentially. If this sounds a little complicated that is perhaps because our neuro-cognitive processes do indeed happen to be amazingly intricate in this kind of way.

Actually, I am not the first to say that the rhythm of speech is directly linked to meaning activations in the brain. Back in 1887, Paul Passy (founder of the IPA or International Phonetic Association) was saying very much the same thing. But it does seem that I am perhaps the first to say so after him. In *Les Sons du Français* (1887, 5th ed. 1899: ¶82-3) he wrote as follows (my translation and underlinings):

> Now, the ear and the mind have a natural tendency to group the less strong parts of a phrase around the stronger parts. Although in the phrase *Un garçon est venu pour te voir* [a boy has come to you see] there is not a single interruption, we like to hear it as if it is divided into three parts: *Un garçon – est venu – pour te voir.* This takes us to a second phonetic division in language-use: we can divide the breath-groups [= our 'pieces'] into force-groups [= our rhythm-groups or 'bytes']. We call a force-group the totality of sounds that group themselves around a relatively strong syllable. In general, a force-group consists of two or three words closely connected by the meaning. In very slow speech, each force-group can become a breath-group.

Leaving intonation largely aside for the moment (but cf. vBuuren 2004), I do want to emphasize that all rhythmic examples so far can in principle be said monotonously, i.e. on one single note. As any drummer will tell us, one cannot have melody without rhythm, but one can have rhythm without melody. You only have to tap with your fingers on the table, as we often do, to realise that rhythm is absolutely independent of melody or intonation. As said, however, many writers on prosody insist on mixing up rhythmic stress and intonational prominence.

Most of intonation is a matter of (upward or downward) pitch-jumps on the S-syllable of the S-word of an S-byte. The S(trongly stressed) thereby becomesT(onic). The function or meaning of T is *contrast* of that word/byte with one or more other concept/thought activations in the speaker's brain (which are thereby rejected). The vocal T-gestures are almost unavoidably accompanied by corresponding gestures with the head and hands, as so helpfully evidenced to us by people talking on their mobile phones. This raises the question, what came first in language evolution, the non-vocal or the vocal gestures. But for the moment, let us concentrate on rhythm.

One final remark to round off this section. Having insisted that *all* homines sapientes can handle 3-tier rhythmic hierarchies with 4 degrees of beat or stress, I may point out that many can

do much better than that, for instance drummers and tabla players using all four limbs and/or ten fingers independently to create extremely complex patterns and pattern combinations. I was even told once that some African drummers can play 26 against 27 beats to the bar but I find that hard to believe. Judging for myself, I never quite succeeded in playing Chopin's Op. 66 Fantaisie-impromptu on the piano, with four notes on the right against every three notes with the left hand. But some people tell me it's a doddle.

2. ORIGIN AND GENESIS OF RHYTHMICALITY. Having convinced the reader, I hope, that language exhibits quite a complex rhythmic structure of a 3-tier hierarchy with 4 degrees of beat or stress, the next question is how this remarkable rhythmic virtuosity could have developed in human evolution. It is obviously a sine qua non for the genesis of language and no other animal has anything like it. The answer, I think, is quite simple and straightforward in a way: in my view it was an almost inevitable outcome of a much more mystifying and crucial development, upright walking or bipedalism.

The human ape separated from the other primates around 6 million years ago (mya). It took over 2 million years or so for these early hominins to give up walking on all fours. Niemitz (2010) presents very convincing arguments that bipedalism could only have developed as a result of habitual wading in shallow water. We know that proboscis monkeys, too, unlike most primates, are fond of foraging while wading, and are indeed good swimmers and divers. Finlayson (2009:36), on the other hand, suggests that the straight-limbed two-legged walking of orangutans and humans may go back to a common ancestor some 12 million years ago, gorillas and chimpanzees having lost this ability in their evolution. But he, too, thinks (2009:77) that early hominims' preferred habitats were wetlands near water to drink and with prey to eat. Whatever the explanation for human bipedalism, it appears that our ancestors must have done quite a lot of wading, and that many of them actually learnt to swim rather well. Nowadays perhaps a vast majority of the world's population cannot swim, for practical or cultural reasons or even for fear of water. It is not a natural human ability, but once having *learnt* the art most of us do very nicely to extremely well –one internet site in fact lists 150 different swim strokes and a look around a busy swimming pool exemplifies a good many of these.

Human bipedalism of course freed the arms and hands for purposes other than walking, with enormously far-reaching effects on our physical and cerebral development. For one thing, it allowed the development of our (often ignored or belittled) physical dexterity –requiring powerful brains– that no other animal possesses, as seen (or heard) from dancers, acrobats, jugglers, athletes, gymnasts, musicians, voice-artists, typists, bus-drivers, skateboarders, carpenters, swimmers, to name but a few. What is more, considering that some degree of 'imagination' (mind-reading, cheating, political scheming) has been observed in bonobos and chimps, it simply had to lead, one should think, to an awareness of more and less efficient body movement, for instance when carrying the baby, wielding a club, running, or especially perhaps, when teaching oneself to swim or dive for eatables besides just wading. Experimenting, choosing, making up one's mind, indeed what we like to call 'free will', appears the inevitable consequence, ultimately, of walking on our hind legs only, and since no other primate ever did anything like it, we are now the only animals who can make conscious *choices* –not necessarily the right ones, unfortunately– and have thus become lords of the earth.

If we now assume, as has been suggested, that communal dancing and vocalizing and thereby the awareness and control of rhythmic patterns, were in place at the beginning of linguistic development, something like the following scenario seems not unlikely. An obvious starting point,

in my view, was to experiment with swimming strokes, although that does not of course exclude other possibilities like running, jogging or just playing. Thus, I could well imagine one of Michael Phelps' forefathers (or mothers?) some 100,000 generations ago trying out different ways of doing or combining dog-paddle, breast or 'frog' stroke, backstroke or experimenting with crawl-strokes as indicated in (4) and then continuing exactly the same patterns on dry land, as in (5). Or perhaps this is where one of Michael Jackson's ancestors felt the urge to take over. Early *homine*s doing these kinds of things would certainly have made themselves popular too, to be followed and admired, ultimately resulting in communal dancing and singing and of course many sons and daughters spreading their genes. Like our vocal virtuosity noted below, this too would seem to fit in well with Dunbar's (1996) theory that hominids are first and foremost social groups held together by 'grooming'.

The crawl-stroke, by the way, was introduced into western culture by native Americans, so it may not be all that far-fetched to think that our African ancestors tried it out as well. If not, that would still leave the other 149 strokes to experiment with.

(4)
	head/breath	l l l r l r l r r r r
	arms	l r l r l r l r l r l r l r l r l r l r l r l r l r
	legs4x	r l r l r l r l r l r l r l r l r l…
or:	legs6x	rlrlrlrlrlrlrlrlrl

Syntax of crawl-Swimming: concatenating variouS hierarchieS of trocheeS, iambS, dactyli . . . (l=left, r=right)

Any reader who can swim should try this out some time, taking the leg-kicks as the 'tactus' or starting-point and counting 1-2-3-4, 1-2-3-4…, then adding arm-movements on the 1 and the 3, and finally taking a breath on the 1, by turning the head to one's preferred side (the left, in my case). This yields a perfect (near-isochronous) 3-tier rhythmical hierarchy with three degrees of 'beat' or accent: S(trong) on the 1, M(edium) on the 3 and z(ero) on the 2 and 4 movements.

When breathing alternately on the left and the right, one must count 1-2-3-4-5-6-7-8, 1-2-3-4-5-6-7-8… This yields a 3-tier hierarchy with four degrees of stress: S on the 1, M on the 5, w(eak) on the 3 and 6, and z on the remaining movements. Further experimentation as suggested in (4) will meet with restrictions, depending on lung-capacity and physical condition, as Michael Phelps' ancestor must have found as well.

All this gives rise to hierarchies of duple rhythms like trochees and iamBs. If one then does six rather than four leg kicks to each two arm movements, that requires counting in sixes and twelves instead of fours and eights. And it yields triple rhythms like dactyli, amphibrachs and anapaests. I am not sure about the role, in the various L-R alternations, of our two cerebral hemispheres, considering that triple leg rhythms easily combine with duple arm rhythms.

Much of this, especially the counting, will sound very familiar to musicians. It seems, by the way, that the concept of stress or accent is dependent on simultaneous movements, i.e. a rhythmical hierarchy, rather than on loudness or force, as is the traditional view. I might restate here that isochrony here and elsewhere, including the lifelong impact of the maternal heartbeat (Morris, 1967:96), does not entail isochrony in speech. One more reminder: more than two z's in a row is physically and/or mentally impossible. It seems we can count only in twos, threes and ones, not in fours and fives.

The next step for the creative reader is to try out the same movement patterns on dry land, perhaps in the privacy of his/her own home rather than in a public swimming-pool, adding hip and torso gestures and appropriate (primitive) battle cries, thus:

(5)
```
voice!   ba   ba babamuwa mmbwaba mbwaba maama buwaamaa
head       l l l      r  l       r l           l r
torso    f   B   l r l r     f   B   r l r r  f    f
hips       l   r  f      B     l       r r    f   B
arms     l r l r l r l r l r l r l r l r l r l r l r l r
legs4x   r l r l r l r l r l r l r l r l r l...
or:      rlrlrlrlrlrlrlrlrlrl
```
Syntax of dancing (after having a Swim aS in 4): 6/7 or more tierS (f=forward, b=backward).

As can be seen, (5) is identical to (4) but with the addition of hip and torso gestures and of elementary vocal gestures with only two lip consonants ± nasality and two vowels. In actual fact, it would seem that vocalisation was much more advanced than this at the (pre-) homo erectus stage. The idea that language requires only 15 or so 'distinctive features' is bizarre. Such views completely deny our incredible vocal virtuosity surpassing even our overall physical dexterity noted above, and thereby its very long evolutionary history and, in my view, good Darwinian reasons required. Witness for instance the vocal virtuosity of cartoon characters, the Muppets, Cathy Berbarian, Al Jarreau, Bobby MacFerrin, Maria Callas, Um Qalsum, Kiri Te Kanawa, Louis Armstrong, the All Blacks and little boys playing with dinky-cars. No other animal has anything like it. But our most remarkable achievement is undoubtedly that we can learn to speak in childhood (or after!) with, for instance, a North or South London accent or even with an upper-middle- or working class accent requiring incredibly fine and precise vocal control. A single 'slip of the tongue' may destroy your credibility and reliability for good. One false move has cost people's lives. Which seems indeed one good Darwinian reason for the evolution of such vocal skill.

This section sketched what seems a reasonable scenario for the evolution of human rhythmicality out of bodily activities emanating from bipedalism and its development, in a social context, to communal dancing, hand-clapping, drumming and vocalising. Further discussion of its development into chanting, singing, speaking and ultimately language is beyond our present scope and must be left to a future article. For the moment I would merely suggest that the development of rhythmic hierarchies and sequences in itself must have enlarged the human brain considerably and made it capable of activations within activations, in a Chinese box or Russian doll arrangement, both simultaneously and sequentially. This was later to become the hallmark of intentionality or mind-reading (cf. Dunbar 2004:43ff) and of both phonology and syntax. Perhaps, then, rhythmicality is at the bottom of all that.

3. THEORY AND DEFINITION OF RHYTHMICALITY. Like most people I used to think of rhythm as something physical: louder and softer notes in music or syllables in speech, organised in time. In my 2000 retirement lecture on *Teaching the Rhythm and Intonation of English,* I concluded however, after decades of teaching and research, that 'it's all in the mind'. When I subsequently happened to discover the work of Paul Fraisse (1956, 1974) on the psychology of rhythm I found this supported in the most detailed and instructive treatment of the subject so far. It seems a pity that his publications in French have received little or no attention in the largely English-language literature. His work links up with that of the famous child-psychologist Jean Piaget, who was a friend and collaborator.

Fraisse's 'experimental psychology' investigated not merely the perception of events but also

associated bodily movements and the *grouping* thereof in time. One of his ideas I found particularly helpful is that of the 'présence psychologique'. We do not live at a point in time but in a psychological present of perhaps 3 or 4 seconds with a maximum of about 7 seconds. In speech, this entails that the beginning of an utterance is still present by the time one gets to the end, in rhythm it means that the patterns at the beginning and the end, and in the middle, are all parts of a whole. The rhythms *directly* experienced within our psychological present are clearly not at all comparable to those of a year, a day, an hour, or even thirty seconds ago. Another inspiring work, Cooper and Meyer's (1960) *The Rhythmic Structure of Music,* has the merit of making a clear distinction between 'isochronous' musical meter and actual 'non-congruent' rhythms (cf. my examples (1, 2) versus (3) above) and of drawing our attention to the hierarchical structure of both. Interestingly, it does so (1960:6) in terms of 'the five basic groupings… iamb, anapest, trochee, dactyl, amphibrach', albeit without allowing for what I have called the 'mone'. Nor does this allow for slightly longer groupings, still in agreement with the Rhythmic Alternation Principle RAP, that we may call +dactylos, +amphibrach+ and anapaest+, with the + indicating another w(eaker) syllable besides the S(tronger) one. Thus, for instance: =wSww= S= wwSww= S= wwSw= *versus* =wSw= wSw= wSw= wSw= wSw=, either grouping being in agreement with RAP: no more than two w's between S's and no more than one after/before pause.

A major objection to Cooper & Meyer, however, is that it lacks Fraisse's concept of the psychological present. After treating *directly* experienced shortish phrases, they apply the same concepts to 'higher architectonic levels' such as themes, movements, and symphonies, resulting in umpteen-tiered-hierarchies and infinite degrees of musical accent. It seems that the Cooper & Meyer treatment stood as a model for *metrical phonology,* which may explain the numberless degrees of stress mentioned above in that linguistic approach.

In vBuuren 2005 I attempted to define our sense of rhythm as follows, with 'rapping' as shorthand for 'grouping in agreement with the RAP principle:

> Rhythm = the 'rapping' of events within one's psychological present into (hierarchies of) trochees, (+)dactyli, (+)amphibrachs(+), iamBs, anapaests(+) and/or mones.

After reading Sydney Lamb's (1999) work on neurocognitive linguistics, I gradually came to realise that the psychological present 'in the mind' is better regarded as the span of consciousness 'in the brain'. The term 'events' suggests the perception of sounds, etc., more than our basic, underlying and irrepressible bodily movements noted by Fraisse and others including the present writer. Finally, it seems appropriate to distinguish between *rhythm* or events patterned in time, *rhythmicity* or controlled rhythmic behaviour, and *rhythmicality* or (human) awareness/control of rhythm. On these considerations I may now suggest the following update: Rhythmicality = the 'rapping' of bodily movements within one's span of consciousness into (hierarchies of) trochees, (+)dactyli, (+)amphibrachs(+), iamBs, anapaests(+) and/or mones.

REFERENCES

Attridge, Derek. 1982. *The rhythms of English poetry.* London. Longman.

Cooper, Grosvenor and Meyer, Leonard B. 1960. *The rhythmic structure of music.* University of Chicago Press.

Donald, Merlin. 1998. *Mimesis and the executive suite: missing links in language evolution.* In approaches to the evolution of language, ed. by J.R. Hurford et al, 44-67. Cambridge University Press.
DunBar, RoBin. 1996. *Grooming, gossip and the evolution of language.* London. Faber and Faber.
——. 2004. *The human story.* London. Faber and Faber.
Finlayson, Clive. 2009. *The humans who went extinct.* Oxford University Press.
Fraisse, Paul. 1956. *Les structures rythmiques.* Louvain, Publications universitaires de Louvain.
——. 1974. *Psychologie du rythme, Paris, Presses universitaires de France.*
Halliday, Michael A K. 1975. *Learning how to mean.* London. Edward Arnold.
——. 1985. *An introduction to functional grammar.* London. Edward Arnold.
Keijsper, Cornelia E. 1985. *Information structure.* Amsterdam: Rodopi.
Knight, Chris. 1998. *Ritual/speech coevolution: a solution to the problem of deception.* In Approaches to the evolution of language, ed. by J R Hurford et al, 68-91 Cambridge University Press.
Lamb, Sydney M. 1999. *Pathways of the Brain.* Amsterdam. Benjamins. Merker, Björn. 2011. *Eleven theses on music, language, and the brain.* http://www.pathsplitter.net/ul/1001017d2.pdf
Morris, Desmond. 1967. *The naked ape.* London. Vintage Books.
Niemitz, Carsten. 2010. *The evolution of the upright posture and gait– review and new synthesis.* http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2819487/
Passy, Paul. 1887. *Les Sons du français.* Paris. H. Didier.
Patel, Aniruddh. 2008. *Music, language and the brain.* New York. OUP.
Selkirk, ElisBeth O. 1984. *Phonology and syntax.* Cambridge Mass. M.I.T.
Stringer, Chris. 2012. *The origin of our species.* London. Penguin Books Sweet, Henry. 1876. *Words, logic and grammar.* In H.C. Wyld (editor) Collected papers of Henry Sweet, O.U.P. 1913. Reprint from: Transactions of the Philological Society: 470-503.
Van Buuren, Lucas. 2004. *Rhythm and intonation considered neurocognitively.* LACUS forum 30:137-146. lacus.org/volumes/30/301_vanBuurenLucas.pdf
——. 2005. *On timing and rhythm – in British english.* LACUS forum 31:113-123. http://www.lacus.org/volumes/31/vanBuuren_1.pdf
——. 2009. *Some more readings of Alice and the caterpillar.* LACUS forum 35:271-280. http://www.lacus.org/volumes/35/220_van_buuren.pdf

This article was first published on www.lacussquare.org

LACUS Forum **39:2.67-72 (2025)**

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COMPLEMENT COERCION AND LEXICAL SEMANTICS

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Abstract: This paper will argue that the decompositional structure of the senses of the verbs and nouns in sentences such as "John began the book," with the aspectual verb *begin*, and "John enjoyed the book," with the psychological verb *enjoy*, can help to account for the differences in complement coercion effects found experimentally for these two categories of verbs.[1] While the aspectual verbs involve a sense that picks out a particular portion of the time period of the expected complement event, the psychological verbs express the sense of a psychological relation between the denotations of the subject and the complement noun phrases. Further, complement nouns such as "the book" express a sense of having a particular purpose or use, which provides for the possibility of the event interpretation coerced by the aspectual verbs. On the other hand, the relational meaning of the psychological verbs allows for the construction of an interpretation using only the denotative meaning of the nouns in the relation together with pragmatic inferences. Further, this paper will show that three different ways of doing lexical semantics all provide decompositional mechanisms for accounting for the differential results of the aspectual and psychological verbs in the Katsika et al coercion study cited here.

Key words: Complement coercion, lexical semantics, psycholinguistics.
Languages: English

VERBS SUCH AS *begin*, *finish*, and *start* require their complements to refer to an event that has a certain duration. But in a sentence such as "John started the book," the grammatical object of the verb *start* is an entity, *the book*, that is not an event. Nevertheless, this sentence gets an interpretation that means something like 'John started doing something with the book'. In other words, such sentences involve a mismatch between the interpretation that the sentence naturally gets and the interpretation that one might expect the sentence to get, based on the meanings of its individual words. The 'doing something with' in the natural interpretation isn't overtly expressed

[1] Only meaning related categories are intended here; different languages render sense features in grammatically distinct ways. To cite Pustejovsky, "word meaning need not have anything to do with grammaticalization" (1995:86).

in the sentence itself. This part of the interpretation of the sentence is said to be coerced by the selectional restriction of the verb.

Verbs such as *enjoy, prefer,* and *resist*, also involve a similar process of interpretation. Like *begin the book*, *enjoy the book* also requires the "doing something with the book" interpretation of the complement noun *book*. For a time, researchers grouped these two kinds of verbs together as verbs that require an activity as their second arguments. However, a recent study (Katsika et al 2012) has found psycholinguistic evidence that while aspectual verbs such as *begin*, *finish*, *start*, and *complete*, show coercion effects in experiments involving eye movements, psychological verbs such as *endure*, *prefer*, and *resist*, do not demonstrate such coercion effects.

1. THE EXPERIMENTAL EVIDENCE. This coercion study involved a comparison of the time subjects took to read sentences with three kinds of verbs—aspectual, psychological, and entity selecting verbs. The focus was on the time involved in eye movements as these kinds of sentences were read. The sentence frame in (1) illustrates what was tested, with an example of each of three types of verbs:

(1) Alexandra was a. completing / b. enjoying / c. shelving a sci-fi book when the secretary announced the meeting.

Completing illustrates the aspectual type of verb, its meaning having to do crucially with a portion of time at the end of the activity denoted by its complement. *Enjoying* illustrates the psychological type of verb, and in this sentence frame it sets up a particular psychological relationship between Alexandra and the sci-fi book. S*helving* illustrates the entity-selecting type of verb, which requires a word referring to an object, here the sci-fi book, as its complement, and the meaning of the sentence involves some sort of mostly physical activity.

Because of the temporal nature of the meaning of aspectual verbs, they select for a complement that denotes an activity, as in (2).

(2) Alexandra was completing her second reading of the sci-fi book.

But in sentences like (1), where the complement is an entity, the sci-fi book itself, the natural interpretation of the sentence was given an appropriate context in the Katsika et al. (2012) study, that Aleksandra and John liked to read novels. Thus, Aleksandra was completing her reading of the sci-fi book. In other words, in (1) with *completing*, the selectional restriction of the verb is violated, but nevertheless the sentence gets a natural interpretation that includes the concept of an event or activity related to the object, the book. On the other hand, psychological verbs like *enjoy* do not have this kind of restriction on their complements. Regarding psychological verbs like *enjoy*, Katsika et al. describe their complements as a target of emotion, which contrasts with the temporal nature of the complements of the aspectual verbs. Now the target of an emotion can be an event or an activity, but it can also be an entity.

The Katsika et al study tested the intuition that the different complement selection needs of aspectual and psychological verbs would give the interpretation of sentences with these verbs different levels of difficulty. They hypothesized that sentences with "begin the book" would be more difficult to interpret than sentences with "enjoy the book," because while *begin* selects for an event-denoting complement, *enjoy* doesn't. This hypothesis was confirmed by the results of their

study, which showed that the eye movements of subjects reading sentences with aspectual verbs like *begin* involved more time spent in back-tracking and in second passes than while they were reading similar sentences with verbs like *enjoy*.

2. EXPLAINING THE EVIDENCE. Three different approaches to lexical semantics which can be seen to provide some explanation of these results all depend crucially on taking into account the smaller component concepts that go into making up the meanings of words. The three approaches that I would like to look at briefly here with respect to how they provide mechanisms that can be used to explain the results of the Katsika study are those of James Pustejovsky (1995), Ray Jackendoff (2003), and Jerrold Katz (1972). While each of these approaches involves a great deal of complexity that goes beyond the limits of this short paper, I will try to suggest the kinds of theoretical mechanisms of each approach that are relevant here. My main claim here is that each of these approaches makes important use of the internal concepts constituting the meanings of words in helping to account for the experimental results.

2.1. PUSTEJOVSKY. The first approach that we will look at is that of James Pustejovsky (1995). It makes use of what he calls qualia structure. Qualia are modes of explanation for the meanings of words, and Pustejovsky's work uses four kinds of qualia: constitutive, formal, telic, and agentive qualia. For example, in distinguishing between the meanings of the nouns *novel* and *dictionary*, Pustejovsky notes first that, with respect to the formal quale, roughly what larger category the word belongs to, novels and dictionaries are both kinds of books. Regarding the constitutive quale, we see that novels and dictionaries are constituted or built up differently: a novel consists of a narrative while a dictionary consists of a listing of entries. They also differ with respect to their purposes, what we use them for, which is the telic quale: we read a novel from cover to cover, but we consult a dictionary for a particular entry. Finally, the agentive quale expresses how they come into being: a novel gets written while the entries in a dictionary are compiled. In Pustejovsky's theory, words of all lexical categories have this kind of qualia structure, which is expressed formally by structures for *novel* and *dictionary*, as in (3) and (4).

(3)

$$\begin{bmatrix} \text{novel} \\ \begin{bmatrix} \text{Qualia:} & \text{CONST} & = \text{narrative} \\ & \text{FORMAL} & = \text{book} \\ & \text{TELIC} & = \text{reading} \\ & \text{AGENT} & = \text{writing} \end{bmatrix} \end{bmatrix}$$

(4)

$$\begin{bmatrix} \text{dictionary} \\ \begin{bmatrix} \text{Qualia:} & \text{CONST} & = \text{word list} \\ & \text{FORMAL} & = \text{book} \\ & \text{TELIC} & = \text{reading} \\ & \text{AGENT} & = \text{compiling} \end{bmatrix} \end{bmatrix}$$

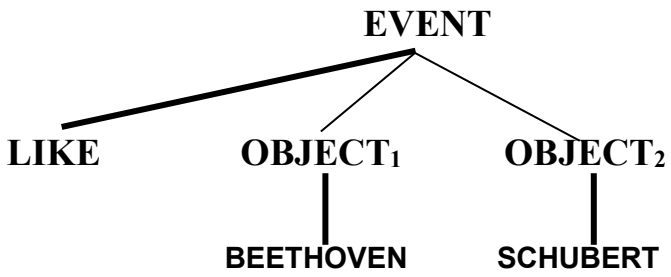
Without going into too much detail here, I will just say that variables and semantic types are

involved in these structures as well, and that these latter aspects of Pustejovsky's theory allow it to account for the type shifting that occurs with sentences like "begin the book," in which *book*, whose semantic type is that of an entity, gets its type shifted in the course of the interpretation of the sentence to that of an event because of the selectional restriction of the verb *begin*. It is important to note that the telic quale for *book*, what it is used for, is "read," while the agentive quale, how it is made or comes into being, is "write," both of which are event readings. Since both of these readings are available in the qualia structure of *book*, coercion in the predicate "begin the book" results in an ambiguity between two possible interpretations: begin reading the book or begin writing the book. What is important to note here is that an event reading must be available in the qualia structure of the complement NP in order to allow for type shifting to an event interpretation. *Book* has two of these, hence the ambiguity.

In general, then, in the cases of the sentences with aspectual verbs in the Katsika study, it is the qualia structure of word meaning in Pustejovsky's theory that can be used to account for their interpretation. So, regarding the predicate *begin a book*, Pustejovsky (1995:205) says that "because of the qualia structure of the complement inherited from that of its head *book*, the typing requirements specified by the governing verb *begin* are satisfied just in case the type of the NP is coerced to an event function." Moreover, this theory allows for the multiple types denoted by nouns like *book*, which has both a physical aspect and an information bearing aspect, by using the formal device of what is called a dot product, so that its type is expressed as [PHYSICAL OBJECT**.**INFORMATION]. What is important for us here is that all of these theoretical devices make crucial use of the concepts making up the meanings of words.

2.2. JACKENDOFF. Jackendoff represents the semantic or conceptual structure of sentence meaning using function-argument notation. For example, the meaning of the sentence "Beethoven likes Schubert" is represented as in (5).

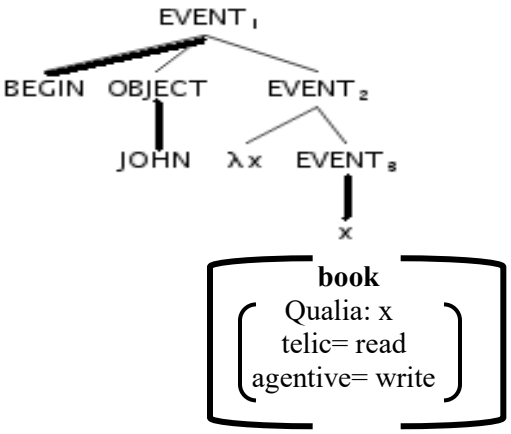
(5)



(5)

This tree (Jackendoff 2003: 379) indicates that the meaning of this sentence is the two-place function LIKE, which is an event, with its first argument place filled by the object Beethoven and its second by object Schubert. The bolded lines indicate the head of a structure and the unbolded lines other detailed parts of a structure, in this case the two argument places of the function LIKE. While not working this out in any detail, Jackendoff suggests that the conceptual structure of sentences involving complement coercion, as in the case of the sentence, "John began the book," would indeed involve Pustejovsky's qualia structure and rely on what the logicians refer to as lambda extraction to pick out the appropriate value of the quale needed for the correct interpretation (390-92). This suggests something roughly like the structure in (6) for an interpretation of "John began the book."

(6)



What the lambda extraction does here is allow the structure to pick out the value of the event reading of the second argument of the BEGIN function from the telic or agentive quale inside the meaning of the noun *book*. The λx binds the variable x inside the representation of the meaning of *book*, so that the event denoted is indeed the concept of the reading (or the writing) of the book. The structure given here does not show all the details needed for this interpretation but it represents the general idea as suggested by Jackendoff.

In appealing to Pustejovsky's qualia structure, Jackendoff clearly looks inside the meanings of words to their internal conceptual structure, in order to account for such phenomena as complement coercion.

2.3. KATZ. Quite a bit before these theories of Pustejovsky and Jackendoff came along, Jerrold Katz was working out his semantics of the conceptual structures of words, phrases and sentences. His *Semantic Theory* (1972) made crucial use of the notion of the selectional restrictions of verbs in explaining how the pronouns in (7) and (8) get their meanings.

(7) It's addled.

(8) He is reading something.

Katz concluded that we understand that the meaning of "it" in 7 is either an egg or someone's brain, and that the meaning of "something" in 8 is an object with characters on it that a person can read. He proposed that these meanings of the two pronouns must come from the selectional restrictions of the verbs "addled" and "reads," respectively, and he arrives at the following conclusion:

> The problem posed by these cases is, then, how to specify that such information in the meanings of constituents which are grammatically related to the pro-forms is also information about the meaning of the pro-forms, how to extract the information from the related constituent and transfer it to the pro-form (Katz 1972:89).

His implicit solution to this problem was to rely on what he called categorized variables and his conception of a universal projection rule. The categorized variables specify what syntactic constituents of a phrase or sentence would appear as arguments to fill the argument places of predicates. The projection rule combined the senses of predicates with the senses of their arguments

in order to derive the senses of whole sentences. So, we might imagine a selectional restriction on the subject of the predicate *addled* that restricts its application to a brain and an egg. Since the categorized variable in the reading of this predicate, (NP,S), would pick out the subject, the projection rule, in combining the meaning of the subject with the meaning of the predicate, would place the two senses of the selectional restriction, a brain or an egg, as the possible arguments of *addled* in (6), resulting in its two possible interpretations.

It would seem that Katz's approach to cases of complement coercion like those in "John began the book" would rely on the selectional restriction of the verb "begin" and the decompositional structure of the meaning of "book" to derive the interpretation of the sentence. Since the sense of book would include the concepts of having the purpose of being read and being an artifact that is made by being written, these event concepts would be available for the two possible construals of this sentence, just as in the case with the telic and agentive qualia in the approaches of Pustejovsky and Jackendoff. How this is actually accomplished within the mechanisms of Katz's theory is left as a problem to be worked out. What seems clear is that such an explanation of complement coercion is available in Katz's approach, and of course it depends crucially on the internal structures of the meanings of the words involved.

REFERENCES

JACKENDOFF, RAY. 2003. *Foundations of language: Brain, meaning, grammar, evolution*. New York: Oxford University Press.

KATSIKA, ARGYRO, DAVID BRAZE, ASHWINI DEO, & MARIA MERCEDES PIÑANGO. 2012. Complement coercion: Distinguishing between type-shifting and pragmatic inferencing. In *The mental lexicon*. Vol. 7, no. 1:58-76, ed. by Gonia Jarema and Gary Libben. Amsterdam: John Benjamins.

KATZ, JERROLD J. 1972. *Semantic theory*. New York: Harper & Row.

PUSTEJOVSKY, J. 1995. *The generative lexicon*. Cambridge, MA: MIT Press.

This article was first published on www.lacussquare.org